

Frontispiece to Woods Treatise on Farriery.

1. 2. 3. 4. &c. The 18 Vertebrae of the Thorax & Back.

Head Bone A

The 7 Vertebrae of the Neck.

I II III IV V VI VII

L The Hip Bones

X The Swordlike Cartilage

2. The Cartilaginous endings of the Ribs on the Breast Bone.



W Elliott Del. et Sc

London Printed for John Ryall in Fleet street.

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A

NEW COMPENDIOUS

TREATISE

OF

FARRIERY.





BY JOHN WOOD
Illustrated to the King of Sardinia, by now
a Lieutenant in Her Majesty's
the Second Battalion

LONDON

Printed by R. Wall, at the Royal Exchange, in the Strand
in the Strand
in the Strand

A NEW COMPENDIOUS
TREATISE
OF
FARRIERY.

Wherein are set forth in a Plain, Familiar, and Natural MANNER,

The DISORDERS incident to
HORSES,
AND

Their respective CURES;

TOGETHER WITH
Some interesting OBSERVATIONS on
Bleeding, Purging, Exercise, &c.

AND
A certain PRESCRIPTION for the CHOLICK.

By JOHN WOOD,
Late Farrier to the King of SARDINIA; but now
at CHESHUNT in HERTFORDSHIRE.

The SECOND EDITION.

LONDON:

Printed for J. RYALL, at HOGARTH'S-HEAD,
in FLEET-STREET.

M.DCC.LXII.

A NEW COLLECTION
THE FARRIS
 FARRIS

Whitman and his son in a black
 military, and Native American

The Proceedings in regard to

H TO RIGHT HONORABLE

AND

THEIR EXCELLENCIES

THE

Some of the
 Bishops, etc.



AND

A certain Description for the CHURCH

BY JOHN WOOD

It is called for your
 use from the King of
 at Chesham in
 me to express the
 The record
 I feel in being
 I will do
 thing to the
 for the many
 gence



of Dedication, filled generally with
 willow flattery, would not be half so
 agreeable to your Lordship, as the ex-
 pressing plainly but honestly the senti-
 ments of a grateful heart: since all the
 world is agreed that it is that
 your Lordship's own heart feels those
 sentiments in the greatest degree of per-
 fectness.

The Right Honourable

Earl of ROCHFORD.

My LORD,



I is easier for your Lord-
 ship to imagine, than for
 me to express, the pleasure
 I feel in being furnished
 with an opportunity of giv-
 ing a public testimony of my gratitude
 for the many benefits and great indul-

vi The DEDICATION.

gence I have been honoured with during my attendance on your Lordship; and allow me, my Lord, to say, that, incapable of judging myself, I have learnt from others, that the usual stile of Dedications, filled generally with fulsome flattery, would not be half so agreeable to your Lordship, as the expressing plainly but honestly the sentiments of a grateful heart; since all the world will agree with me in this, that your lordship's own heart feels those sentiments in the greatest degree of perfection.

The following piece of mine, coming out under your Lordship's sanction, will, I flatter myself, meet with a reception in some measure favourable from the public; as nothing that you condescend to patronize can be deemed by the candid unprejudiced part of mankind altogether destitute of merit.

Apprehensive lest my duty should be construed impertinence, I will not presume

The DEDICATION. vii

presume to add any thing more, than
to beg leave to have the honour of sub-
scribing myself, with the greatest duty
and respect,

My LORD,

Your LORDSHIP'S

Most obedient and

Most humble Servant,

JOHN WOOD.

The DEDICATION
 to be left to the
 to be left to the
 to be left to the
 to be left to the

My Lord,
 Your Lordship's

PREFACE
 Most excellent and

Must first inform to the
 candid reader, that the pub-
 lication of the following
 work does not proceed
 from any motive of ostenta-
 tion; the bent of my design tending al-
 together to the establishment of a prac-
 tice





able to the friends of nature in regard
of the sentiment necessary for the cure
of diseased horses. It has even been a

THE

PREFACE.

loaded with superfluous steps of man-
eous divs. Hippocrates, and the an-
cient physicians, who were consistently
the best and most celebrated of any



Must first insinuate to the
candid reader, that the pub-
lication of the following
work does not proceed
from any motive of ostenta-
tion; the bent of my design tending al-
together to the establishment of a prac-

x The P R E F A C E.

tice resulting from some years experience, which, though unattended with pompous prescriptions, will, I flatter myself, be found to be intirely agreeable to the demands of nature in regard of the treatment necessary for the cure of diseased horses. It has even been a maxim with me by no means to multiply remedies without necessity, and that upon a double consideration. In the first place such a conduct creates a considerable supernumerary expence; and in the next turns out no small detriment to the animal, that is thus overloaded with superfluous heaps of nauseous drugs. Hippocrates, and the antient physicians, who were confessedly the best and most celebrated of any that ever existed, were very sparing of their prescriptions in respect of the maladies incident to the human body. Nature was their constant guide, and Medicus Naturæ Minister their invariable motto. And indeed, what would one aim at more, than at a method of relieving nature by natural means? Now,

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Now, the mechanical oeconomy in regard of horses, or any other animal, is subservient to the same laws, as that of the human body. Which reflection has ever influenced me to a Hippocratical practice, and to give my horses as few medicines as possible.

By way of introduction, I have given an anatomical description of the component parts of the animal body, and consequently that of a horse. Should any one be desirous of being let in farther to that secret, he may only consult Mr. Snape.

I have been very superficial in regard of the symptoms of the diseases, as a recourse had to the ingenious Mr. Bartlet can abundantly supply that defect. I could not, in the course of this performance, as it is a very material article, avoid pointing out the absurdity, and even mischievous consequence of exhibiting purges, and those frequently very strong, on occasions that imply no such necessity. But this I think I
T H E
have

xii The P R E F A C E.

have done without the least tincture of malevolence or any particular prejudice, that can be imputed to me in respect of any one person living. My business is to instruct, not accuse. If therefore I have expressed my sentiments somewhat earnestly when that matter has occurred to me, I hope the reader will nevertheless by no means rank this zeal of mine for the well-doing of horses amongst the number of unpardonable offences. But I shall make no farther apology, but leave the whole of my conduct throughout the piece to the judgment of the public.

However, I must not forget to return my most humble thanks to those generous personages amongst the nobility and gentry, that have been so benevolent as to encourage this work by their subscriptions; which will ever demand from me the utmost tokens in my power of due respect and gratitude.

THE



THE INTRODUCTION.



AN animal body is composed of parts that produce all the necessary functions of life. It consists of membranes, muscles, glands, blood-vessels, lymphaticks, ligaments, cartilages, and bones; of which the bones are the hardest part, and are the chief supporters of the whole composition, to which they give shape, and are like levers for the muscles to play upon.

They

They consist of hard fibres fastened to one another by others that are small and transverse. Those fibres are porous, soft and easily discerned. It is probable that they are nourished by the serous or lymphatick part of the blood, which is brought to them by the arteries, and carried back by the veins. As the pores fill with a substance of their own nature, such as we suppose the lymph to be, so they encrease, harden, and grow close to one another; but, when their pores are full of this substance, then the bones are grown to their utmost extent, hardness and solidity. Their blood-vessels, being compressed on all sides by their bony channels, bring no more blood than what is sufficient to supply the places of their decaying particles.

All the bones of the body, which have any considerable thickness, have either a large cavity, or they are spongy and full of little cells. In both the one and the other there is an oleaginous substance, called marrow, contained in proper vesicles or membranes like the fat: in the larger bones this fine oil by the gentle heat of the body is exhaled through the pores of its small bladders,

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bladders, and enters some narrow passages which lead to some fine channels excavated in the substance of the bones according to their length; and from these other cross passages (not directly opposite to the former lest they should weaken the bone too much in one place) carry the marrow still further into more longitudinal channels placed nearer the surface of the bone. All this contrivance is, that the marrow may supply the fibres of the bones, and render them less apt to break.

All the bones of the body, except the teeth, and these that are articulate to one another, are covered with a thin but close and strong membrane, called periosteum; which has an exquisite sense, that gives one grounds to think that it is an expansion of some of the tendinous fibres of the muscles. Its use is to supply the vessels, which enter the substance of the bones, with proper nourishment.

Each large bone is much bigger at its extremities than in the middle, in order to give a firmness to the articulations, and to prevent the bones from being easily put out of joint. But because the middle of the

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the bone should be strong to sustain the weight of the bones, and resist blows and falls, the fibres on this account are there closely compacted together, supporting one another, and the bone besides is formed hollow, and consequently is not so easily broken, as it must have been had it been solid and smaller; for, in regard of two bones of equal length and equal number of fibres, the strength of the one will be to the strength of the other as their diameters.

The bones contain a quantity of volatile salt and spirit, which are very subtle and penetrating, some sulphur, which is very fetid, a little phlegm, and much earth.

A cartilage is a smooth and solid body, softer than a bone, but harder than a ligament. It is furnished with no cavities nor cells for containing of marrow; nor is it covered with a membrane as the bones are. The cartilages have all a natural resource, by means of which, if they are forced from their original figure, or situation, they return to it of themselves, as soon as the force is taken away. They are chiefly in those places where a small and easy motion is required, as in the ears, nose, larynx, trachea, arteria,

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arteria, and sternum; and their natural elasticity serves instead of antagonist muscles. They cover also the ends of all the bones, which are joined together for motion: first, because they are smoother than the bones; secondly, because they are without sense; and thirdly, because, as they are softer than the bones, the attrition, which is made by the motion of the joint, is the more easily supplied.

A ligament is a white and solid body, softer than a cartilage, but harder than a membrane. The ligaments have no conspicuous cavities, nor are they endued with any sensation; lest they should always suffer upon the motion of the joint. Their chief use is to fasten the bones, which are articulated for motion, together, lest they should be dislocated on any violent movement.

Of the ARTICULATION of the BONES.

THE bones are articulated or joined to one another either with a manifest motion, or with a small and obscure motion, or without any motion at all: I shall only take notice of the articulation with a manifest motion.

The

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The extremities of all (the bones, that are articulated to one another with a manifest motion, are bound together by membranous ligaments, which rise from the conjunction of the epiphysis with the bone, and passing over the articulation, are inserted in the same place in the other bone. Thus they form a bag, which embraces all that part of the extremities of both bones which play upon one another; and in this bag is contained a mucilage for the easier motion of the joint. This mucilage is separated by glands contained in some fat on the inside of the ligaments. Those bones which are articulated by a ginglymus, have the ligaments much stronger on their sides than they are either before or behind, that the protuberance may be kept to play true in their cavities; for, could they slip the least to either side, the bones would be frequently out of joint.

I shall now enter on the description of a membrane. A membrane is a web of several sorts of fibres interwoven for the covering and wrapping up of some parts. Their membranous fibres give them an elasticity, whereby they can contract and closely

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closely grasp the parts they contain, and their nervous fibres give them an exquisite sensation, which is the cause of their contraction. On which score they are vastly irritated by the sharpness of medicines, and are not united without much difficulty when wounded in their texture.

There are a number of small glands which separate an humour fit for moistening the parts which they contain, by reason of the thickness and transparency of the membranes. The ramification of the blood-vessels is more apparently to be seen in them than in any other part of the body. Here the innumerable divisions, windings, and turnings, serpentine progressions, and frequent inosculations, not only of veins and arteries together, but also of veins with veins, and arteries with arteries, make a most agreeable embroidery, and delicate net-work, covering the whole membrane. Nor is nature always constant to the same disposition, but delights in variety here, as well as in the disposition of the branches and leaves of plants and trees. Those that cover the solid parts are properly called membranes, and these have their particular names, as the peritonæum, which wraps up all that

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is contained in the abdomen; the pleura, which invests the thorax; the periosteum, which surrounds the bones; and, the pericardium, that involves the heart. Those which form the coats of vessels, and which contain the humours, as those of the veins, arteries, stomach, bladder, intestines, testicles, &c. are called tunics or coats, and those which cover and embrace the brain, as the dura and pia mater, are called meninges. Of all those kinds of membranes, some are thin, and others thick; and the same membrane is thick in some places and thin in others, which is the case of the membrana adiposa, which is thicker in the neck than in any other part of the body. The use of the membranes is to cover and wrap up the parts, to strengthen them, to save them from external injuries, to preserve the natural heat, to join one part to another, to sustain small vessels and the nerves which run through their duplicatures, to stop the returning of the humours in their vessels, as the valves stop the blood in the veins and heart, of the chyle in the lacteals and thoracic duct, and of the lymph in the lymphatic vessels.

By

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By the *membrana adiposa* is most commonly understood that part of it only which lies next the flesh, and which contains but little fat in its cells; and therefore, appearing more membranous than the rest, is said to be the basis of the *cellulæ adiposæ*; and even some part of this hath been taken by anatomists for the *membrana carnosa* upon the account of its redness; for here the blood vessels lie very thick, the vesicles not being distended with fat. The *membrana propria musculorum* is that which covers immediately all and every one of the fibres of a muscle, and is closely tacked to them. There is another called *membrana communis vasculorum*, which is a thin membrane, and accompanies almost all the vessels of the body. All these membranes receive veins, arteries, and nerves from the part which are nearest to them.

Of the Muscles.

THE muscles are the instruments of motion, and it is by them, that all the motions of every animal body are performed. They are of several kinds. Some are long and round, as are most of those that
move

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move the limbs, and are broader and flatter at their origins, than they are at their insertions, where they run out in the shape of a small cord, and form those strong sinews that are inserted into the hocks and pasterns. They are made up of several bundles of fibres or threads, and all the muscles of this kind are rectilinear, having their fleshy fibres on their outside gradually shorter than those in the middle; which not only makes their insertions, but this contrivance prevents the limbs from growing fleshy, which, by any other mechanism, would happen upon every change or alteration in the blood; and would very much weaken and debilitate those parts, as we see in many instances, where the muscles of the lower limbs happen to be fleshy near their insertions.

The strength of a muscle consists in the number of its fibres, and is suited to the part it is to move. For where the motions are strong, the muscles are likewise strong; but, where there is not so much strength, then the muscles are not so strong. Each muscle, and every fibre in a muscle, has nerves, veins, and arteries; either of which being tied deprives the muscle of the power of contracting; but the stoppage be-

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ing removed they contract again, and contracting swell. So that the action of the muscles is performed by the rarefaction of the blood and spirits distending the cavities of the fibres. The rarefaction of the blood and spirits we suppose to be performed after this manner. The blood is full of globules of air strongly compressed by the surrounding particles of blood attracting one another, from whence is formed a globule, or shell of blood, in the middle of which is a small globule of air, whose force of expansion will be always proportional to the force by which it is compressed. These globules, continually circulating through the cavities of the muscular fibres, are mixt with the animal spirits, which with the action of the parts drop from the nerves into the cells of the fibres, and, attracting the particles of the blood more strongly than they do one another, give the inclosed air an opportunity of expanding itself, and consequently of swelling the vesicle, and each vesicle swelling at the same time, the whole fibre must be shortened, and the shortening of all the fibres is the contraction of the muscle.

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Though the contraction of the fibres be considerable, yet the swelling is scarcely sensible, by reason of the smallness of the cavities of the fibres. For each fibre resembles a string of bladders, each of which being blown up singly will raise a weight to some determined height; and, if the whole string of similar and equal bladders be blown up together, the space, through which the weight will rise, will be proportional to the number of bladders, or length of the string, or fibre of the muscle. Now, though the swelling of a large bladder, required to raise a weight to some considerable height, must be very great, yet several small bladders will do the same thing with a force and swelling less in any given proportion. For, suppose a bladder of a determined bigness can raise a weight a foot, an hundred bladders, whose diameters are each an hundredth part of the former, being blown up will raise the weight to the same height. But the force of inflation and the swelling of all put together will be an hundred times less than in the large one, and thus we see how mechanically the structure of the fibres contributes to the contraction of the muscles with a very inconsiderable force,

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force, and a swelling almost imperceptible.

The use of the heart to the body is the same as that of a pendulum is to a watch, or of the engines, which, by the force that is given them, carry water by the assistance of pipes to supply the town. So does the heart send the blood forward through the arteries to give the body a fresh supply of nourishment. It has two cavities which are called ventricles, the one which detaches the blood to all parts by the arteries of the body, while the other receives it from the veins. The contraction and the dilatation of the heart are called its systole and diastole. Its ventricles have valves to prevent the blood from rushing in to retard it in its motion; while both auricles contract at the same time, as likewise do the ventricles; and when the auricles are contracted, the ventricles are dilated. To account for this alternate motion of the auricles and ventricles of the heart, we must consider that the contraction of all muscles is caused by the influx of the blood and animal spirits into the cavities of their fibres; and therefore, whenever this ceaseth, the contraction of the muscles likewise ceaseth, or, the swelling of the fibres abating, they may be

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reduced by any small force to the same length they were of before their contraction; which alone is their natural state, the other being intirely caused by an external force. If therefore there be an equal and continual influx of the blood and animal spirits, the contraction of the muscles will likewise be equal and continual; and, if the influx is unequal and interrupted, the contraction will be the same. What this influx is will best appear from the action of such muscles as have no antagonist, and over which the will has but a small influence, the principal of which are the heart and the muscles, which dilate the thorax in inspiration. Now both these are alternately dilated and contracted, and consequently the blood and animal spirits do not flow continually into their fibres, but at small intervals of time, to which these contractions answer. That they have no antagonist muscles, is evident to every one who is acquainted with the structure of the body. For the muscles which in a quick expiration accelerate the motion of the ribs downwards, are so weak as to be of no moment; and, that the pressure of the atmosphere upon the surface of our bodies cannot supply the place of antagonist muscles, is as apparent to any one, who considers that the air within us is
always

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always in equilibrio with the air without us, and consequently the pressure of the atmosphere can neither promote nor retard the contraction of the thorax or dilatation of the heart: and there being nothing else that can influence them, their alternate contractions and dilatations must be owing to the influx of the blood or animal spirits. There are indeed other muscles which have no antagonist, such as the sphincter gulæ, ani, and vesicæ, which we do not observe to be thus alternately relaxed and contracted. But the reason of this is, because their force is very weak, and consequently their contraction small, and differing so little from their relaxation, as to be imperceptible to us; and, perhaps in the ordinary course of nature they act no otherways than the fibres of the arteries do, which, when they are dilated by the blood by their innate elasticity, contract again. It may perhaps be objected, that, when one side of the face is struck with a palsy, the other is constantly and incessantly convulsed; and that therefore the influx of the blood and spirits must be continual; but to this I answer, that when the swelling, which causeth the contraction of the fibres, subsideth, and the muscles are relaxed, they will still be shortened, 'till by some small power they are pulled out to

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their natural length, which being here wanting, and one contraction presently following another, that side of the face will always appear as if incessantly convulsed. But the natural bent of the ribs is downwards, by which the intercostal muscles are stretched out again, as well as by the weak force of their few antagonists; and, when the fibres of the heart are relaxed, they are by the influx of the blood into the auricles and ventricles distended again till the next contraction.

And that the muscles are not in a perpetual sense of contraction, will likewise appear from the nature of the cause of their contraction, which, without doubt, is the rarefaction of the blood and spirits in the cavities of the muscular fibres. Now, of whatever nature we conceive this rarefaction to be, it can be but temporary, and must quickly cease in such a small quantity of fluids as the fibres of a muscle, or rather as one vesicle of a fibre is capable of receiving at a time. Nor will it be of any use to affirm, that there is a constant supply of fresh blood and spirits which keep up the inflation, as it is caused by the pressure of the rarefied fluids against the sides of the

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the fibres. Whilst this pressure continues, the progressive motion of the fluids through the fibres must be at a stop; nor can they move forward again till the rarefaction begins to abate; that is, till the fibres are relaxed, and consequently the contraction or action of the muscle must cease before fresh blood can be rarefied. If all this is duly attended to, it will be found of use in knowing more of the animal body.

As both blood and spirits are required for the inflation of the muscles, and we are sure the blood moves with a continued stream, the animal spirits must only drop from the nerves into the muscular fibres, and there rarefy the blood. When a drop falls, the fibres are presently inflated, and the muscle contracted. As soon as the rarefaction of the blood is over, the muscle is relaxed, till the next drop falls from the nerves, by which it is contracted again. Thus the systole and diastole of the heart regularly and alternately follow one another; and, this being first clearly understood, it will be easy to give a reason why the auricles are constantly contracted when the ventricles are dilated, and the ventricles contracted when the auricles are dilated, notwithstanding

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standing they have all the same nerves and blood-vessels. For, suppose all of them full of blood before the heart begins to beat, and that the auricles and ventricles are ready to contract at the same time, yet, because the strength of the ventricles is much greater than that of the auricles, they will contract, and, by their contraction, hinder that of the auricles, which endeavour likewise to expel the blood; by which means they are distended, but cannot produce this effect, till the relaxation of the ventricles makes room for its reception: thus their motions necessarily become alternate.

The blood abounds with volatile salt and spirits, contains some phlegm and sulphur, a little earth, but little or no fixed salt: alcalies dissolve it, and acids coagulate it. I shall next say something concerning the arteries.

The arteries are conical channels, which convey the blood from the heart to all the parts of the body: each artery is composed of three coats, of which the first seems to be a web of fine blood-vessels and nerves for the nourishing of the coats of the artery. The second is made up of circular or rather spiral fibres,

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fibres, of which there are more or fewer strata according to the bigness of the artery. These fibres have a strong elasticity, by which they contract themselves with some force, when the power by which they have been stretched out ceases. The third and inmost coat is a fine, dense, transparent membrane, which keeps the blood within its channels, which otherwise, upon the dilatation of the artery, would easily separate the spiral fibres from one another. As the arteries grow smaller and smaller, so the coats grow thinner, and the coats of the veins seem only to be a continuation of the coats of the capillary arteries. The structure of the arteries being thus premised, it will be easy to account for their pulsation. When the left ventricle of the heart contracts, and throws its blood into the great artery, the blood in the artery is not only thrust forwards towards the extremities, but the channel of the artery is likewise dilated; because fluids, when they are pressed, press again to all sides, and their pressure is always perpendicular to the sides of the containing vessels; but the coats of the artery by any small impetus may be distended. Therefore, upon the contraction of the heart, the blood from the left ventricle will not only press the blood

blood

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in the artery forwards, but both together will distend the sides of the artery. When the impetus of the blood against the sides of the artery ceases, that is, when the left ventricle ceases to contract, then the spiral fibres of the artery by their natural elasticity return again to their former state, and contract the channel of the artery till it is again dilated by the systole of the heart. The diastole of the artery is called its pulse, and the time the spiral fibres are returning to their natural state is the distance between two pulses. This pulse is in all the arteries of the body at the same time; for whilst the blood is thrust out of the heart into the artery, the artery being full, the blood must move in all the arteries at the same time; and because the arteries are conical, and the blood moves from the basis of the cone to the apex, therefore the blood must strike against the sides of the vessels; and consequently every point of the artery must be dilated at the same time that the blood is thrown out of the left ventricle of the heart; and as soon as the elasticity of the spiral fibres can overcome the impetus of the blood, the arteries are again contracted. Thus there are two causes, which operating alternately keep the blood

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blood in a continual motion, viz. the heart and fibres of the arteries. But because the one is stronger than the other, therefore, though the blood runs continually, yet when an artery is opened it is seen to move per saltum.

Having shewn which way and by what means the blood circulates through the heart and along in the arteries, I shall just give a necessary hint of the use of knowing the pulse, in order to distinguish a fever arising from an exalted state of the blood, from one occasioned by a too viscid quality of that fluid.

First then the pulsations of the heart are said to be sixty in a minute, or thereabouts. Now, if the pulsations are either defective in regard of this standard, or exceed it, it evinces an irregularity in the circulation of the blood. The former circumstance shews the blood to be in a viscid or an obstructed state, and the latter demonstrates it to be in too exalted a condition. These are the two principal things to be attended to in order to be apprised of the nature of the fever. For a fever must proceed from one of these causes; and unless the farrier or

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practitioner

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practitioner regulate his conduct agreeably to this theory, he can never attempt the cure of horses in any degree of certainty, as Mr. Bartlet very justly has observed.

I have avoided saying any thing of either the quantity or the velocity of the blood ; as all that have hitherto wrote could never yet bring this matter to a determination. I shall only observe, that the greatest part of the blood passes through the heart ten times in one hour.

Concerning the Lungs.

AS no one can be unacquainted either with the figure or the situation of the lungs, from a frequency of having viewed animals when opened, it will be needless to say any thing in this place on these heads. I shall therefore only point out the use of these organs. But first it may not be improper to insinuate, that they are invested with a membrane, that is a production of the pleura ; which membrane, as Mr. Gibson observes, is chiefly affected in a pleurisy. And, indeed, I myself, on inspecting horses opened, have observed this membrane

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brane quite consumed, while the pleura remained sound and intire. As to the use of the lungs, the learned Pitcairn has mechanically deduced the great effect they by means of the air produce upon the blood. For, whilst the foetus is in the womb, the vesicles of the lungs lying flat upon one another compress all the capillary blood-vessels which are spread upon them; but, as soon as the animal is foaled, the air by the dilatation of the thorax is thrust into the branches of the trachea arteria, and blows up the vesicles in spheres; by which means the compression being taken off from the blood-vessels, and those equally expanded with the lungs, all the blood has a free passage through the pulmonary artery. But when the air is thrust out again by the contraction of the cavity of the thorax, it being a fluid body, compresses the vesicles and blood-vessels upon them every where equally. By this compression the red globules of the blood, which, through their languid motion in the veins, were grown too big to circulate in the fine capillary vessels, are broken and divided again in the serum, and the blood made fit for nutrition and secretion. This pressure of the air upon the blood-vessels may be demonstrated

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to be equal to an hundred pounds weight or more, and upon coughing four times as much. A great many experiments have been made to shew the force of the air on the blood: but it would take me up too much time to descant on this matter in this place.

As the gullet, stomach, and intestines are parts of an animal body sufficiently known by every one, I look upon it as unnecessary to give here any description of them. As to what regards the use of the stomach, I have hinted that in my management of surfeits, to which I refer the reader.

Of the LACTEAL VEINS.

THE use of the lacteal veins is to receive the finer parts of the food after the stomach has broken and divided it small enough. For whilst the groffer parts of the aliment are by the peristaltic motion of the guts, and the pressure of the midriff and muscles of the lower belly, thrust out at the anus, the finer parts, or chyle, are by the same power squeezed into the narrow orifices of the lacteal veins.

These

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These are long and slender pipes, whose coats are so thin as to become invisible when they are not distended with chyle or lymph. They arise from all the parts of the small guts by fine capillary tubes, which, as they run from the sides of the guts to the glands in the mesentery, unite and form larger branches. These are called *venæ lacteæ primi generis*. The mouths of these lacteals, which are open into the cavity of the guts from whence they receive their chyle, are so small as not to be seen by the best microscope. It was necessary they should be smaller than the finest arteries in the body, that nothing might enter which might stop the circulation of the blood. The same extremity of the lacteals has likewise communication with the capillary arteries of the guts, by which they receive a lymph which dilutes and propels the chyle forwards, and washes the lacteals and glands, that they may not furr and be obstructed by the chyle's staying in them. Upon fasting, the other extremity of the lacteals discharges the chyle into the vesicular cells of the glands dispersed up and down the mesentery; and from these arise other lacteals of a larger size, which in short carry the chyle forwards,

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forwards, till it mixes with the blood. The lacteal veins have valves at several distances, which hinder the chyle from returning back into the intestines.

Of the Use of the SWEET-BREAD.

THE use of the sweet-bread is to dilute the chyle with the liquor that is separated in the glands of the guts, that it may the more easily enter the mouths of the lacteal vessels.

The Use of the LIVER,

IS to separate the gall from the blood, which, on that accounts, may be properly called a gland.

The Use of the GALL or BILE.

IT is not in any one's power to assign a reason why a horse has not a gall-bladder, as other animals have. But, that a horse has plenty of bile, and the like vessels to separate it from the blood as other animals are furnished with, admits of no dispute. Therefore I shall describe the use of it,

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it, and leave the reader to consult others for the rest.

The use of the bile is to sheath or blunt the acids of the chyle; because those being entangled with its sulphureous parts thicken it so, as that it cannot be sufficiently diluted by the sweet-bread to enter the lacteal vessels. This appears not only from the analysis of the bile, which yields more of a lixivious than a volatile alkaline salt, but likewise from what Leeuwenhoek has observed, viz. That however great a quantity of acid salts he had seen amongst the aliments in the stomach, he could never find any in the chyle after it had passed the duodenum.

The use assignable to the spleen being a disputed point, I shall not take upon me to advance any thing on that subject; especially, as all that could be said in regard of it would be of very inconsiderable consequence.

As for the office of the kidneys, bladder, and ureters, every one knows they are destined to the separation of the urine from the blood, and are of the same use to the body as a gland: and, indeed, the kidneys are, properly speaking, nothing but a gland. Of

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Of the GLANDS.

IT is a very material point to be acquainted with the nature and mechanism of the glands, which are very numerous in an animal body, and at the same time subservient to a variety of uses.

A gland is principally composed of a long continued convolution of one or more arteries, from whose sides arises a multiplicity of excretory ducts of larger or smaller dimensions in proportion to the thicker or thinner fluid, destined by nature to pass through them, agreeably to the exigencies of the animal fabrick.

Most parts of the body are supplied with glands, and those of various kinds. The skin abounds with minute glands for the secretion of the sweat. The udder is a gland, whose office it is to prepare the milk; the liver is a gland, that separates the bile from the blood; and the kidneys are glands, formed for the secretion of the urine. The salivary glands are of use to moisten the food, and to render it more easy to be digested.

As

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As to what regards the lymphatick glands, some of these are situate in the head, some of them in the chest, and some in the lower belly : whilst other are dispersed in the interstices of the muscles, or accompany the large blood-vessels. The limbs are furnished but with few of them, and those generally small ; which notwithstanding, if distempered, will acquire a considerable size. From a bursting of these vessels thus increased in their bulk proceed dropsies. When this affair happens in the thorax, that whole cavity is filled with water ; if in the lower belly, a common dropsy is wont to be the consequence. Several ill effects arise likewise from disorders in the other glands, as the jaundice from a distempered liver, or an obstruction of the biliary ducts ; violent colds from a preternatural state of the parotides, and other glands about the ears, mouth, and throat ; and a stubborn costiveness, and sometimes a purging, from a diseased condition of the small glands and membranes of the intestines. The glands of the external parts are also sometimes inflamed and suppurate, and sometimes grow hard and schirrous : nor are the glands subservient to the lubrication of the joints exempt from being affected with diseases.

Of

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Of the LYMPHATIC VESSELS.

THESE vessels arise from all parts of the body at the extremities of the arteries, in the same manner as the veins, but more plentifully from the glands than any where else. They are clear, pellucid tubes, of a cylindrical figure, and, as they appear to the eye, seem only to consist of one exquisitely thin coat. They are dispersed through different parts of the body, and pass through the glands, but at the same time they have other vessels that pass along the outside of the glands, which mechanism, as Mr. Cheselden well observes, prevents their fluid from being obstructed, which would readily happen, in case these glands, through which they pass, should become diseased. The use of the lymph is thought by all, as it is a very fine pure water, to dilute the blood, and render it more fluid, that it may be better able to pass through the minutest vessels. Mr. Gibson makes here a very just observation, viz. that the coats of the lymphatic vessels are so thin, that they are exposed to frequent ruptures, and more especially in regard of horses, on account of their great labour;
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and, indeed, I myself have seen the chest and lower belly of some horses filled with this water: Nor is it all improbable, that from a rupture of these vessels, by too great a load of water in them, principally proceeds the sudden swelling we sometimes observe to befall them. On this occasion, I never experienced any medicines so efficacious in carrying off the load of water, as the diuretic balls I have recommended for the grease, in conjunction with bleeding and a rowel or two. Notwithstanding the gentle operation of these balls, a single dose of them is attended with a more powerful effect on the blood and juices, in the remote part of the body, than even three doses of strong physick would be. And, indeed, I flatter myself, that whoever will condescend to consider the nature and powers of the respective ingredients of their composition, will very readily allow them to be in all respects calculated for dissolving viscidities in the blood, and removing obstructions even in the minutest vessels of the body, and consequently of carrying off whatever load may affect it, and of restoring the blood to a state intirely fit for circulation.

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Of the BRAIN, and NERVES.

I Shall avoid giving a long description of the brain, nor shall I descant on the different parts that compose it, contenting myself with a bare explanation of the use it is of to the body.

Now, as the heart sends blood to all parts of the body, so does the brain separate the animal spirits from the grosser part of the blood, and conveys them to all parts of the body by the nerves, to keep the arteries and parts warm. The blood, which is brought into the brain by the arteries, is separated by the glands, which make the cineritious and cortical substance of the brain, from its finest and most subtile parts called animal spirits, which are received from the glands by the fibres of the medullary substance which is the beginning of the nerves. Each nerve therefore is a bundle of very fine and small tubes, of which some are no bigger than the hundredth part of an hair; and these tubes are the excretory ducts of the cineritious or glandulous part of the brain. This does not only appear from the structure of the brain, but is evident likewise, as

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we are assured that there is such fluid, as what we call animal spirits, running in the nerves. For, since all sensation is performed by the nerves, it must be done either by the substance of the nerve, or the fluid that is contained in the nerve. If by the substance of the nerve, it must be by a vibration from the part upon which the impression is made to the brain. Now, that there can be no vibration from the impression of external objects upon animal nerves, which are slack, and surrounded intirely by other bodies, is evident, and therefore sensation must be performed by the fluid in the nerve. The motion of this fluid is not rapid, as is generally supposed, but slow and languid; seeing all it motions proceeds from the dilatation of the arteries compressing the soft substance of the nerves, and from the force by which it is thrust through the glands of the brain: And, when the nerves are full of this fine fluid, or when they are hurt, the impressions of objects may be communicated to the brain, without any quick motion in the animal spirits, either by retarding or stopping their progressive motion, or by causing an undulation, which the brain will be immediately sensible of. For example, if any one only receives a
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hurt at the end of the toe, the sensation will instantly be communicated to the brain.

Of the EYES.

THE organs of sight are divided into two parts: The internal part, which is the globe or body of the eye, and the external part, which are those parts about the globe subservient to it. I shall wave giving a description of the eye-lids, or the use of them, as the weakest capacity must know them; nor need I intimate, that the eyes have muscles to move them, or point out the number of those muscles, as the matter is of no great moment. I shall therefore proceed directly to the description of the globe of the eye.

Now, the globe of the eye is of a spherical figure. In it are contained the principal instruments of vision. It is composed of coats and humours; the first coat makes the white of the eye, which is full of small veins and arteries, that appear big in an inflammation of the eyes. The second is thick, hard, and smooth, opaque behind, but transparent before, where it makes the third coat, called cornea, because

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because it is transparent like the horn of a lantern. In the forepart of the eye, which is surrounded by the white of the eye, it has a greater convexity than the rest of the globe of the eye, and is composed of several parallel laminæ, which are nourished by many blood-vessels so fine, as not to hinder even the smallest rays of light from entering the eye; and it has such an exquisite sense, that upon the least pain the tears will be squeezed out of the glands subjacent to it, in order to wash off any filth, which by sticking to the cornea, might render it opaque.

The fourth is the choroides. This lies under the second, and is much thinner than that. It is furnished with a great number of blood-vessels which come from the second, and which are spread upon it, as also with several glands, which separate from the blood-vessels a black liquor, which tinges all this membrane internally, which is otherwise of a whitish colour. This coat is open, or has a hole before for the passage of the rays of light, called the pupil. That part of this coat, which makes the circumference of this hole, and which lies upon the

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ides of the chrySTALLINE humour, is the fifth coat, called uvea, which is formed of circular and straight fibres. It contracts and dilates according to the different impressions of light, and of objects. The iris is the outside of the uvea, where the different colours appear. On the inside of the uvea, from its circumference which joins the choroides, rises the ligamentum ciliare. This is composed of short fibres, which run upon the forepart of the glassy humour to the edges of the crystalline, like lines drawn from the circumference to the centre. By the contraction of these fibres the forepart of the eye is made more prominent, and the retina pressed further back from the chrySTALLINE humour, or the axis of vision is lengthened, when objects are placed too near the eye.

The sixth is the retina, so called, because it resembles a net, which covers the bottom of the cavity of the eye. It is a fine expansion of the medullary fibres of the optic nerve upon the surface of the glassy humour as far as the ciliary ligaments. On this coat are made the impressions of objects.

The

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The humours of the eye are three: The first is called the aqueous; which lies in the forepart of the globe immediately under the cornea. This humour is thin and liquid, and of a spirituous nature; for it will not coagulate in the greatest frost. This evinces the necessity of a continual supply for this humour, which, in effect, it is not without. For, if the cornea be pricked, and this humour squeezed out, it will be restored again in the space of ten or twelve hours.

The second humour is the chrySTALLINE. This lies immediately next to the aqueous behind the uvea opposite to the pupil, nearer to the forepart than the backpart of the globe. It is the least of the humours, but much more solid than any of them. Its figure, which is convex on both sides, resembles two unequal ligaments of spheres, of which the most convex is its backside, that makes a small cavity in the glassy humour in which it lies. It is covered with a fine coat, called aranea.

The third is the glassy humour. This hath a great resemblance to the white of an egg. It filleth all the hind part of the cavity of the globe, and it is in a greater abund-

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ance than the other two. It is thicker than the aqueous, but thinner than the crystalline humour. It is contained in a very fine coat of the same name, and gives the spherical figure to the eye. Upon its backpart the retina is spread, with which it is connected at a distance from the crystalline humour requisite to receive the impression of objects distinctly. The optic nerves pierce the globe of the eye a little on the inside of the optic axes. Their external coat, which is a production of the dura mater, is continued to the second coat; as their internal from the pia mater is to the fourth; and their medullary fibres passing through all are expanded into the retina upon which the images of objects are painted. The centre of this expansion is insensible, and all rays which fall upon it are lost, and consequently that point of the object, from which these rays come, is invisible to that eye, as is evident from the famed experiment of Mons. Mariete. The reason of this insensibility proceeds probably from the blood-vessels which enter with the optic nerve, and cover this part of the retina; but, whatsoever its cause is, we are extremely obliged to the maker of our eyes, that the optic nerves are inserted on the inside of the optic axes.

For,

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For, if they had pierced the globe of the eye in the optic axes, then the middle point of every object had been invisible; and, where all things conduce to make us see best, there we had not seen at all. We must likewise have lost some part of an object, if the optic nerves had been placed on the outside of the optic axes; because an object may be so placed, as that all the rays, which come from one point, may fall upon the outside of both eyes; but it is impossible that they should fall upon the inside of both eyes; and therefore that point, which is lost in one eye, is visible by the other. The vessels of the eyes are branches of the external carotides and jugulars, which are distributed upon the external parts of the eyes; and a vein which opens into the superior sinus of the dura mater in the basis of the skull, and an artery from the internal carotide. They accompany the optic nerves, and are distributed on the muscles of the globe of the eye. There are also some lymphatics which accompany the blood-vessels and the nerves of the eyes. The optic nerves are pretty big and round, and there are several pairs bestowed on the muscles of the eyes. All the rays, which come from one point of an object, are by the cornea and

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humours of the eye united in a point of the retina, which is in a strait line drawn from the same point of the object through the centre of the eye, and consequently all the rays, which come from all the points of an object, are united on the retina in the same order and proportion, as the points of the object are from whence these rays come. Therefore the impression, which these rays make upon the retina, must be the image of the object.

Thus in general vision is performed; but it will not be amiss to consider how the several parts of the globe conduce in this action. First we are to consider, that the cornea is more convex than any other part of the globe, by which means all the rays are gathered to pass through the pupil, and none of them are lost upon the uvea.

How the Parts of the Eye contract.

THE aqueous humour, being the thinnest and most languid, easily changes its figure, when either the ligamentum ciliare contracts, or both the oblique muscles squeeze the middle of the bulb of the eye, to render it oblong when objects are

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are too near. The strait fibres of the uvea dilate the pupil when there are but few rays of light, and the circular fibres contract it when they are too many. When the pupil is contracted, then we see more clearly. The glassy humour keeps the chrySTALLINE humour at such a distance from the retina, as is necessary for uniting the rays which come from one point of the retina. The impression of the object is made upon the retina. The choroides is tintured black, that the rays of light, which pass through the retina, may not be reflected back again to confuse the image of the object. Inasmuch as distinct vision consists in the union of all the rays, which come from one point of an object, exactly in one point of the retina, and the rays, which come from objects at different distances, are united at different distances behind the chrySTALLINE humour, they cannot both be united exactly upon the retina; therefore the eye cannot see equally distinctly at the same time objects at different distances. It is for this reason, that the globe of the eye moves so quickly and almost continually, and that the muscles of the eyes have such a great quantity of nerves to perform their motion. When the globe of the eye is so flat, which

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happens in old-age, that the rays pass the retina before they unite, then there is no distinct vision. And if, on the contrary, the globe of the eye is so convex as to unite the rays before they come to the retina, neither is there in that case any distinct vision. Now, when all these things are taken into consideration, it ceases to be a wonder, that the eyes should be so soon affected; or, that blindness, either in regard of horses or men, should be the consequence of a preternatural dilatation of the blood-vessels subservient to the eye; especially, as these canals are so small, the passage of the blood through them so slow, and the malady out of the reach of medicine.

Some natural Observations on BLEEDING, PURGING, EXERCISE, &c.

AS I have pointed out the use of these expedients in their proper place, there is no occasion for my being particular in specifying here the diseases that may require an immediate connexion with them. I shall therefore only mention some incidents where bleeding may be requisite, though there be no appearance of an absolute distemper. Now, there is nothing of more service,

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service than bleeding in all foulnesses of the vessels, proceeding from what cause soever; as likewise in colds, fevers, blows, strains, and in all inflammations. But the blood should be ever drawn away in a small quantity at a time (such as a quart, or three pints, and the bleeding repeated according to the urgency of the disorder) except in the staggers; on which occasion it is sometimes expedient to open two or three veins at once, particular regard being always had to the horse's age and constitution. Bleeding is also necessary after a horse comes from grass, when he has been studded for five or six days in the stable: And the same conduct is necessary when he is turned out, provided he appears to have got flesh. A horse that is brought low, either by sickness, poverty of blood, or hard exercise, in case one would put flesh on him, should have small feeds, and be exercised gently for two or three hours a day. Two or three mashes a week would be of service to him, and the taking away of a quart or three pints of blood once a fortnight, till he be restored to good order. Nor let any one be surprized at this kind of management, and why I direct bleeding so often in such a case; my motive for so doing is this. Should a horse,

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that is brought low and poor through the fore-mentioned treatment, return to his appetite, and be supplied with plenty of food, the vessels in time would become fuller by this increase of nourishment, and be loaded with more than they would have strength to propel forward in its due circulation, in consequence of which will arise obstructions, swellings, or a fever. Now, by taking a little blood away, as I have advised, the vessels will be relieved, and the remainder of the mass will acquire a greater liberty of circulating through the capillaries, and by that means a fresh supply of nourishment could be administered to the whole body.

As it is customary for persons, that have horses to dispose of, to present them in the most advantageous light to the eye of a purchaser, which in reality is a very natural conduct, it would be adviseable, when horses are bought that have been pampered for sale, and are grown of course very fat and fleshy, to take a little blood away, to remove their cloths by degrees, and gradually to increase their exercise, till such time as there be a manifest removal of the superfluous load of flesh, and the muscles restored to their proper strength. Should any symp-

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ptoms of a fever, or cough, display themselves, which is frequently the case, it would be proper to give the horse a common clyster over night, and on the next morning the following mixture: viz.

Take coarse manna, epsom salts, and cream of tartar, of each two ounces, Dissolve these in a pint of water, and four ounces of sweet oil.

Let him eat no corn that day, but about eleven o'clock give him a mash. Let him also drink a little water three or four times a day, with the cold just taken off; and about six or seven at night repeat the above mixture. I proceed in this manner, inasmuch as a single dose of the mixture would not be sufficient to operate upon him; and a strong purge would be altogether improper in any case whatever attended with a fever, as, by its irritation, it would necessarily increase the fever. You will reap an additional advantage by pursuing this method, from the mixture's having time to incorporate itself with the blood, and, by attenuating it, to carry off whatever superfluous humour, that may affect it, by urine. The pursuing this method for a very short while,

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while, together with giving a little nitre after the mixture twice a day, will soon effect a cure. Nor, when nature is once relieved, will there be any occasion for throwing in such a heap of medicines as is the general practice. For, instead of assisting nature as you did at first, you are rendering your endeavours intirely abortive, and bringing on worse evils than what you sat about to remedy.

It is very proper to open a vein now and then, when a horse has stood long in the stable with high feeding, and little or no exercise. I am confident more diseases are consequent to such an indulgence, than when a horse has daily exercise, so that his exercise be not too violent. The case is similar in regard of the human species: It being very observable, that persons of condition and opulence, from a habit of indolence and inactivity, and a want of exercise proportioned to their luxurious way of living, contract several very stubborn disorders, while a poor labourer, from his daily hard employment, and taking no more than what is necessary for the support of nature, enjoys a state of perfect health and vigour. For, when the stomach is loaded, through a gratification.

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gratification of the appetite, with a greater quantity of food, than the constitution can digest, some part of the body or other must unavoidably be burthened with what cannot be discharged by regular evacuations and secretions. But, to return to my subject. Would Gentlemen, instead of confining their horses to a stable, suffer them to run out of, or into it, at their pleasure, as I have recommended in the chapter on the Grease, there would be no occasion either for evacuations by bleeding, or for any medicinal doses. But, if this be impracticable, and the horse be not worked, but stands in the stable for weeks or even months together, without the least exercise but what he receives in the ride, or perhaps is only half an hour out in the whole day, in this case there is no necessity for giving him so much corn, nor yet near a full allowance of hay. But, in lieu of it, let him have some chopt straw along with his corn, or substitute whole straw in the place of hay two or three days in the week, which method will help to keep his body cool and open.

I shall wave determining the quantity of corn requisite for horses, as there is as great a difference in respect of their constitutions,

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as there is in regard of our own species, and agreeably to this difference a horse ought to be fed and worked. Nor shall I harangue in this place on the goodness or badness of hay and oats, or point out to the reader what kind of pastures is the best, a knowledge of these little circumstances being obvious to every person endued with a tolerable share of common sagacity. Besides, I aim at brevity, and therefore on this account likewise shall decline laying down rules for bleeding a horse at this or that time in particular. As for bleeding, I must do farriers and grooms the justice to own, that I never knew a single instance of their doing a horse much damage by this evacuation, as they never attempt to open a vein without an apparent necessity for it. But as for what regards their preposterous drinks and destructive purges, twenty horses are destroyed by these, to one that escapes such abrupt treatment.

As to what regards purging, this I have all alone directed where necessary. But what opinion must one form of such of our fraternity, who set about purging their horses at rated and stated times without the least rational motive whatever? The horse
they,

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they tell you, is full of humours, forsooth, which ought to be discharged. The truth is, their skulls are full of conundrums, and loaded with a stupidity that will admit of no discharge. Let me ask them in this place, what reason can be assigned for giving a horse physick, on taking him up from a summer's grass, with his blood and juices impregnated with a profusion of particles of a soft balsamick nature, and in a perfectly healthful vigour. Why, the horse abounds with too much flesh for hunting? which, in reality may be a matter of fact. But then, cannot this circumstance be better remedied by gentle exercise, and taking a little blood away? Or should the blood, for want of that air and exercise the horse had in the field, be grown too viscid, a gentle dose or two of the diuretic balls would be a more proportioned remedy for the removal of that disorder, as they would attenuate the juices, work off by urine, and open all obstructions, and that without hurt to the constitution, which a frequent repetition of their pernicious purges would not fail to do. I say a frequent repetition, inasmuch as those quacks in farriery are never satisfied, till they behold the poor animal void the very mucus of his guts, which they ignorantly
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and absurdly stile grease. Had I an hundred hunters in the stable, not one of them should ever have a dose of physick, unless he were labouring under one or other of the diseases which I have treated of in their proper place. At the same time I am confident, that they would all perform as good a day's sport, as any of your fine drawn-up gutted hunters whatever kept up in cloths, like a race-horse, from whence they make an elegant appearance at a wood's side on a cold frosty morning, their coats staring, and themselves shaking as if they had got an ague. Another motive for purging arises from a horse's being affected with sciatic pains flying about him, and making him go lame. But it is evident, that they have no idea of the cause of that disorder: If they had, they would never offer to make the least attempt to purge. For this disease proceeds from the blood's being too viscid to circulate in the small vessels, and the wind's being mixed with it. When a stagnation happens, occasioned by too great a grossness of the blood, this wind swells the vessels, and, in consequence of such a distension, a pain must of course follow. Now, strong purges, in this case, drain off the serum of the blood by the intestines, and

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on that account, leave the rest in a state of greater viscosity than what it was in before, which must necessarily increase the disorder. But this may be more obvious to any one, who will only take notice of the swelling befalling horses legs after the administration of these strong purges, which must be attributed to the aforesaid cause, and the weakening the body to a great degree.

Now, instead of purges in this disorder, were a dose given of the diuretic balls, with an addition dram of cinnabar, and after that some powder of guaiacum-wood and liver of antimony once a day in their corn for a month, the affair would turn out to a much greater advantage.

Another absurd practice is, to purge horses before they are turned out to grass: which can arise from no motive but that of making them ill on purpose for the grass to make them well again. However, a reason is assigned, such as it is, for this preposterous conduct. For we are told, that this expedient is resorted to in order to cool and cleanse the horse: For, it seems, if he is turned out foul, he will come in so. A ship, indeed, if she be sent to sea foul, will
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certainly return home in the same, or rather a worse condition; but what analogy there is between a horse and a ship, is past my sagacity to find out. As to the cooling affair, suppose the horse's body to be a little heated, those purges will be so far from cooling, that they will, on the contrary, certainly heat it more; whereas, grass in a week's time effectually removes all heat, this being the principal reason why horses are sent to grass. As to what regards cleansing, should the blood have contracted any viscosity, or corrupted quality, or the legs swell in consequence of this state of it, or from want of exercise, or from exercise too violent, a natural cause of relaxation, no physick in the universe can avail so much in these cases, as would grass, inasmuch as it would absterge and attenuate, and give a balsamic property to the blood and juices, and, together with the air and gentle exercise, would in a little time restore the horse to his former healthy condition. If then this matter be weighed judiciously, no imaginable reason will appear for giving these purges, the omission of which will turn out no ways prejudicial either to the horse or its owner.

I shall

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I shall just mention a custom some persons have of letting their horses, however hot on the road, gorge themselves with large draughts of cold water; a conduct not only very indiscreet, but even fatal, as I have known instances where death has been absolutely the consequence of such an inadvertency. And, indeed, an event of this nature is no ways surprising; as the body is not only immediately overcharged with wind, and the stomach weakened to a great degree, but a stagnation also ensues in regard to the fluids circulating in and near the intestines, and sometimes in respect of the whole fabrick. On which account let the horse drink very sparingly, and, in reality, not at all, till he is within five or six miles of the place he is to halt at. Then, previously to the giving him his fill, let him eat a little hay, and after that mix a handful of bran or oatmeal with the water intended him, which will soften it, and prevent, by their absorbent powers, that irritation, which some waters are apt to create in the stomach and intestines. It is customary for carriers and coachmen to give a little bran along with the corn, for their horses on the road, which is no irrational conduct.

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There is another practice in this our grand metropolis, as indirect as that I have been mentioning, familiar to coachmen, with whom it is customary to plunge their cattle, though reeking hot, up to their bellies in the horse ponds they have in their stable-yards; from whence the gripes, a fever, or greased heels inevitably proceed. This is a point so far from being mysterious, that it falls under every one's natural comprehension. For when the fluids are attenuated through any violent exercise, and all the pores of the body open, whatever on a sudden gives a check to the circulation of those fluids, or closes the pores, must cause a stagnation in some part or other, which stagnation produces of course a pain, and in consequence of that pain a fever, in the part at least, if not in the whole body. On which consideration it will be more expedient to let a horse cool before his heels are washed, and then to make use in the washing them of some clean water in a pail, and a brush. This will answer one's purpose much better; especially, as it frequently happens from the foulness of several of those ponds at the bottom, that the feet of the horse that is led into them contract

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tract more filth, than they had dirt before to be cleansed away.

I cannot here omit an observation concerning a custom the smiths and farriers in general have of drawing horses soles, in order to relieve the inflammation of the part, and to promote a free perspiration. For my part, I never could perceive the least benefit resulting from this management, which leaves such a weakness and tenderness behind, that the poor creatures ever after scarce fail of labouring under an incurable lameness. Nor has Monsieur La Fosse, though he recommends the practice, produced a single instance of its success. In lieu therefore of tearing the sole up by the roots, I would substitute the following method, viz. In the first place, in order to take off from the tension of the vessels, and to lessen the inflammation, I would have blood drawn away at the toe of the horse, and above the hoof: After that I would advise subsequent poultice: viz.

Take linseed boiled in water to a pulp: To this add goose-grease, tar, and cow-dung, and boil them all together to the consistence

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consistence of a poultice, and when cool mix with it a little camphire.

Let this be put into the foot, and all round the hoof, and above the coronet apply a cold charge. Where there is not a great inflammation attending the foot, the addition of a little soft soap to the poultice will very much assist in removing any coagulation in the blood or juices in that quarter. As for the lodgment of any matter under the sole, that may require a discharge, cannot that discharge be brought about without drawing the sole? If so, what necessity is there for drawing the sole, which must hurt the parts that otherwise would not be at all affected? Were farriers to weigh these matters in the scales of just reason, they would not obstruct nature to the degree they do.

To make mention of the different symptoms of lamenesses of the foot from fractions, or any other cause, would be superfluous, as they must occur to every sagacious person's natural observation and experience. I agree with Monsieur La Fosse, that most of the horses, that are thought to be lame in the shoulder or in the parts above the foot, are generally

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generally lame in the foot. I shall only farther hint in this place, that I have omitted, in my chapter on the diseases of the feet, some of them that it would be of no service to mention, such as the casting of the hoof, the pumiced hoof, and some others, where the cure can be only palliative. Letting horses stand upon their litter all the day is very bad, as it heats and dries the hoof, and is very often the cause of founders. The properest stopping is clay, hog's dung, and chamber-lye mixed together.



A NEW



Sometimes the factors are caused without any complaint, and a new compendious

TREATISE

OF FARRIERY.

CHAPTER I.

Of the DISEASES of the HEAD.

As the head is the predominant part of an animal composition; I shall begin with treating on the diseases incident to that organ of the body. Most distempers of the head have a great affinity with each other, and commonly proceed from repletion. One of the principal of these disorders is the staggers, which is sometimes owing to an over-vicious state

of the blood, which in that case circulates extremely slowly, and almost stagnates in the arteries of the head; and, being perpetually urged forward by the force of the heart, bursts its vessels, and, lodging on the brain and compressing the nerves subservient to the motions of the body, obstructs their ducts, and prevents the influx of their native juice.

Sometimes the staggers are caused without any considerable rupture of the vessels, by a watery and red humour transuding from the blood, or by the juice oozing out of the circumjacent glands, which loads the membranes of the brain, fills its ventricles, and stops the course of the animal spirits. The symptoms of this malady are more or less a dulness about the head, swolln eyes, feebleness, a reeling and tottering, a stiffness in the mouth, a shortness of breath, and generally a short cough, together with a costiveness, and staling but very sparingly.

As to what regards external causes, such as blows, falls, fractures of the skull, and the like, I shall pass them by in silence; especially, as they require no particular treatment, but only such as consists of outward applications, as in other wounds and bruises. All that can be done is, by opening two or three veins at once, to take away four or five quarts of blood immediately; which expedient, where the convulsions are not very strong, will work a cure without any farther help. But in case the convulsive disorder should notwithstanding continue, I would advise two rowels, one under the jaws, and another

another in the breast. Bleeding the horse in the mouth will also be of service to him, as the striving to swallow his blood will in some measure keep the jaws from fixing. After he has done bleeding in the mouth, let him stand with a bit in it that has some assa-foetida lapped upon it. A little of the powder of asarabacca blown up his nostrils will likewise be of benefit, by stimulating the part and procuring a discharge of viscous matter. Should a horse be costive, it will be very proper to give him a elyster, and let him on this occasion be over racked with a smooth hand greased and oiled. The following preparation will be serviceable in this case; viz.

Take six ounces of fenna and four ounces of linseed. Boil these in two quarts of water or fat broth, and then add four ounces of oil, and half a pint of salt.

Let likewise three or four horns-full of the following composition be given once in three or four hours; which I have frequently experienced of service on this occasion, and that without any exorbitant expence; viz.

Take a handful of rue, two handfuls of wild valerian, two handfuls of mistletoe, a handful of penny-royal, and the same quantity of rosemary. Boil these ingredients in a gallon of forge-water very slowly till one quart of it is consumed, then strain off the remainder fit for use; to which add two drams of opium, and four of assa-foetida,

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fish, tida, and half an ounce of the tincture of
bees foot, to every four horns full.

Mr. Gibson in this case advises half an ounce
of mercurius dulcis, and a like quantity of dis-
pente, made into a ball with conserve of roses.
And this he does in my opinion very judici-
ously; as nothing can have a greater power of
attenuating and dissolving the viscid, tenacious
matter, that obstructs the glands, and of course
puts a bar to the due circulation of the fluids.

As to outward applications, the following
may be of service; viz.

Take half a pound of mustard-seed fresh
bruised, and a quart of camphorated spi-
rit of wine. Mix these together, and let
the parts affected be well soaked with this
mixture by an uninterrupted rubbing it in,
especially about the head. For no external
remedy will turn out of great efficacy, in
case the jaws of the horse should be so
fixed as to be rendered incapable of swal-
lowing. Force in this case would be very
indirect. The following clyster would ra-
ther be adviseable, viz.

Take an ounce of valerian-root, a handful of
rue, and a like quantity of penny-royal,
together with two or three ounces of hart-
horn shavings. Boil these in a quart of
water to a pint; then strain it off, and add
to it half an ounce of asa foetida.

I have upon occasions thrown into this half an ounce of the anodyne balsam with very good success. It may be administered morning and evening, and in the day let the horse be supplied with broth where hartshorn shavings have been boiled in it.

The causes of convulsive disorders are various. Sometimes they proceed from blows on the head, immoderate exercise, and hard straining; sometimes from a fulness of blood and surfeits. Violent pain in any part of the body will likewise bring on convulsions, particularly should the nerves or tendons suffer from wounds, punctures, or whatever external injury. A stubborn costiveness has also sometimes produced these violent shocks, and sometimes a distempered state of the midriff, and disorders in the stomach and bowels are the immediate cause of them; all which are diligently to be attended to, in order to set about a rational and effectual method of cure. Mr. Gibson intimates that convulsive disorders frequently happen from bots in the stomach. However, as our judgment in regard of this matter must be often very precarious, I shall only insinuate, that where a horse has given evident proofs of his being troubled with worms from his having voided some, we may conclude them to be the cause of those convulsions. In this case, after having lowered the violence of those spasms, we may set about destroying the bots or worms by the same method that I have sketched out. As convulsive disorders in general require in a manner the same kind of treatment, there is no necessity for my reciting the different

species of them. When the horse is a little recovered, let half an ounce of liver of antimony be given him with sulphur and foenugreek, once a day in his corn: and, should he be full of flesh, let him have one or two of the diuretic balls directed for the greafe.

N. B. In strong convulsions, sweating after the manner recommended in fevers may be of great service, as also in a contraction of any part of the body or limbs.

[illegible]

C H A P. II.

Concerning the Epideimical Distemper amongst the Horses in several Parts of England in the Year 1758.

THIS distemper, from the near resemblance it bears to that disease, hath obtained the name of the Mad Staggers; though I never could learn that the mad staggers have at any time been infectious, as this distemper certainly is. I myself have known some farmers to lose nine or ten horses out of their whole number from the infection, communicated by the first diseased horse.

The symptoms of this malady are a dulness more or less about the head, a swelling of the head and eyes, feebleness, a reeling and tottering; attended with a phrenzy, the horse knocking himself against whatever comes in his way, a stiffness in his jaw, shortness of breath, and a continual hanging down of the head, which he cannot suffer to be held up, together with a slow fever, the mouth and eyes at the same time exhibiting a yellow hue, from obstructions formed in the biliary ducts; and, in case he survives, he generally breaks out in blotches about the head, which is an evident indication of the malignant state of the blood.

No great alteration of either the dung or the urine is observable in these cases: which shews that the disorder proceeds from too great a fullness of the vessels, and from obstructions, which causing a pressure on the nerves, and membranes

of the brain, and medullary substance, bring on the recited symptoms. These obstructions of the parts produce convulsions and an inflammation, which if not immediately remedied, will spread themselves over the whole body. Now, an obstruction is originally owing to a viscosity in the blood and juices, which renders the globules of those fluids and the serum too gross to pass through their respective conduits. This circumstance may flow from several sources, viz. from bad provender, from a sudden stoppage of perspiration, from cold, or from a horse's standing too long in the stable, without proper exercise, whereby the vessels become too full, and the muscles are deprived of their essential property of contraction and dilatation; whence the fluids of course grow vitiated, and obstructions are formed unavoidably.

This malady likewise, in my opinion, takes its rise, sometimes from a fault in the air, as I have known several horses seized with it, that were kept in the most regular manner. And, indeed, it is very natural to rank this amongst the other causes; inasmuch as it is certain, that the air has a great influence over animal bodies. For, in case it be too hot and dry, or, on the contrary, too much impregnated with vapours it receives from the earth, it is apt to subject the body to a malignant disposition, the sure spring of inveterate and obstinate obstructions.

In regard to the cure, it will be necessary in the first place to put the horse that is infected immediately by himself, in order to prevent the contagious effluvia, continually issuing from him,

from being received by some other horse. In the next place, it will be requisite to take away two or three quarts of blood from the neck vein, and a quart or more from that of the thigh behind; after which, let the following directions be complied with as expeditiously as possible, viz.

Take a handful of rue, two ounces of valerian root, a handful of the small boughs of mistletoe, with the leaves and berries cut small, half a handful of penny-royal, and the heads of twelve red corn-poppies. Boil these ingredients in three pints of spring-water till one pint is consumed, care being taken to keep the vessel close covered. Then strain off the decoction, then add to it half an ounce of castile soap, or, if that be not at hand, the best common hard soap, three drams of opium; (or even four or five, should there be strong convulsions in the case) half an ounce of assa-fetida, and two drams of the tincture of foot.

As soon as the soap and the assa-fetida are dissolved, give the above drink along with three drams of my antimonial fever powders, made into a ball with honey and flour. I should have advised this powder to be mixed with the drink; but, as it is so ponderous a body, it would be in a great measure lost by sinking to the bottom.

When you have given the horse the drink, cover him up well, and put some assa-fetida

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into both his ears, and let his head be well rubbed with the mixture recommended for the staggers; and, whether he be colicive or not, it will be proper to have him racked with a small hand, and an emollient clyster given him, and repeated every six hours. The following I have experienced, to answer my ends on this occasion the best, viz.

Take rue, penny-royal, mistletoe, and camomile flowers, of each a handful. Boil these well, and strain off the liquor; to which add half a pint of common oil, three or four ounces of coarse sugar, and half an ounce of the anodyne balsam mentioned in the appendix. Should the horse be much convulsed, an ounce of this balsam may be added instead of half an ounce.

This method pursued, let the stable be made as dark as possibly it can, and the horse thrown down on a large bed of straw, half an hour after he has had the drink and clyster. Cover him up warm, and leave him for four hours, or even six, if you find him to rest, which he will scarce fail to do. When he is visibly better, let him drink some warm water, wherein have been boiled some mistletoe and bran, or a crust or two of household bread. After this, he may have a little mash of scalded bran, but no hay or corn for a whole day. Two hours after he has had the mash, it will be proper to give him another drink with the ball, leaving out the opium and soap, and substituting in lieu of them two drams of the

the anodyne balsam. The clyster at the same time is to be punctually administered every six hours, till he be evidently quite relieved.

Should there be any stiffness remaining in the limbs, let him be sweated in the manner I have pointed out. I have avoided the ordering roweling here, as I have seen some horses affected in this manner, die of a gangrene in a little time, a casualty owing to the disposition the fluids are in to contract an immediate putrefaction. I once had seventeen horses thus disordered under my care, all which I treated agreeably to the method I have been setting forth, and was unsuccessful only in regard of two out of the whole number: which disappointment I have all imaginable reason to conclude intirely flowed from obstructions, that were almost universally formed in the vessels, before the exhibition of the medicines.

It may seem, perhaps, to some persons, an odd conduct in me, to advise so much opium. I have notwithstanding, in some particular cases of the mad staggers, given an ounce, and even ten drams of it with good success. But then, I always accompany the exhibition of it with soap, which, by its deterfive and penetrating quality, is a sufficient guard against any ill effects, which a large quantity of that drug might otherwise produce in regard of the animal fluids.

After recovery, a gentle purge will be proper, and some liver of antimony given once a day.

C H A P.

CHAP. III.

Of the Diseases of the Eyes.

IN all external injuries befalling these organs, such as blows, bites, or cuts, attended with a swelling, first wash the part with hot vinegar or verjuice, and then apply a poultice of bread and milk, and renew it till the swelling is abated. Should there be a wound, let it be dressed with an ounce of honey of roses, and a dram of sugar of lead mixed together; to which, in a few days, add a dram of tincture of myrrh. Should there be no wound, let the eye be washed with the liquid, prepared after the following manner, viz.

Take two handfuls of wheat. Lay this on a broad iron, and make a ridge along the wheat. Then lay on half the quantity of salt, and after that, with a piece of iron the length and breadth of the wheat red hot, burn it down, and pour some small-beer betwixt gradually, letting it run off at the lower end, to the value of a tea-cup full, and then renew the wheat and salt, in order to make what quantity of it you please.

This preparation, simple as it may appear to be, will as effectually answer the end proposed in this case, as one ten times more elaborate, as it is cooling and repelling, and at the same time of an astringent nature, from whence it will brace up the small relaxed fibres round the eye. I must

not

not omit to hint in this place, that all eye-waters, where any powders enter their composition, must, by their irritating quality, necessarily increase the inflammation. Should the above remedy be thought too troublesome to make, the following one may be substituted in its room, viz.

Take rosemary and plantain, of each a handful, and an ounce or two of roses, or their buds. Boil these in a quart of spring water, till half the water is consumed. Then strain off the remainder, and add half an ounce of sugar of lead, and an ounce of white vitriol.

Let the eye be washed with this twice a day; and, in case a great inflammation is attending it, let the horse be bled in proportion to his strength and age. A rowel also under his jaws, and another in his breast, would be of service to him. Let his body likewise be kept open with mashes, and an ounce or two of nitre given him morning and evening: which method will take off the fever, thin the blood, and, of course, prevent a stagnation of it, which is very often the cause of a cataract.

Should a white film be grown over the eye, occasioned by the inflammation of it, and a stagnation of the lymph or juices circulating round the cornea, it will be adviseable to get some glass, and, after having reduced it to a very fine powder, to pass it through a piece of muslin, and then to incorporate it with honey, and of this mixture to put the quantity of a horse-bean once a day into

into the eye, which will absterge, and, by its inciding quality, gradually wear off the film, and answer all the intentions of more pompous and complicated applications. I shall communicate to the reader one remedy more for sore eyes, which is the celebrated ointment of the late Sir Hans Sloane, made up thus: viz.

Take an ounce of prepared tutty, two scruples of bloodstone prepared, twelve grains of socotorine aloe, and four grains of prepared pearl. Put these ingredients into a marble mortar, and, with a sufficient quantity of viper's fat, make an ointment.

A little of this ointment, about the size of a small bean, is to be applied to the horse's eye night and morning. Though, by the bye, I must intimate, that, in order to accomplish a cure, it will be requisite to accompany the use of this unguent with internal medicines, and likewise with bleeding and rowelling.

The disorder stiled moon-blindness is the forerunner in reality of a cataract, or a gutta-serena, which scarce ever admit of a cure. These generally make their appearance while the horse is young, and are sometimes owing to the great pain incident to horses on the cutting their teeth, and sometimes to one of their grinders being more prominent than usual, which causes a great irritation in the fleshy substance subjected to it, and brings on a feverish heat: which heat, attracting more fluids to the part than common, relaxes the vessels; from whence arises a viscosity in

in the juices, that presses upon the optic nerves, and obstructs the free circulation of the liquids through the canals bordering on the eye. The mouth ought carefully to be examined on this occasion; and, should the teeth be found in the situation I have mentioned, their sharp edges must be knocked off with a chissel. Where it is evident the eyes are affected by the teeth, the taking a little blood away in that case, together with a gentle purge or two, a rowel, and the above-directed eye-water, are the best-proportioned means for effecting a cure of them.

In a cataract, sometimes one eye is affected, and sometimes both. Eyes thus diseased appear clouded, and their lids swelled, and sometimes almost closed; while a water is generally discharged from them so sharp as to take off the hair, which is occasioned by the feverish indisposition attending the part. Sometimes the eye is quite dry, and only appears thick and cloudy, in which circumstance the horse sees very indistinctly. When the eye is sunk and wastes daily, one may be assured there is no remedy for the disorder. The case is also the same, when the eye, though it be full, displays a white speck at the bottom of it, and the horse, when let loose, runs against any thing that comes in his way.

As a cataract proceeds from some of the same causes as a gutta-serena, by assigning the sources from whence flows the latter disorder, the origin of the former will be pointed out of course. Now a gutta-serena most commonly is derived from an obstruction, gradually formed in the arteries of the retina, by a sily blood. Hence the rays of light,

which should paint the images of objects on the bottom of the eye, falling on these dilated blood-vessels, produce no effect; which is the cause of the light's being either diminished, or intirely lost, according to the degree of the obstruction. Sometimes this disease is owing to a paralytic state of the nerves of this same membrane, which destroys their sensibility; whereby the impulse of the corpuscles of light on them is not sufficient to make them transmit objects to the brain. However, let this species of blindness proceed from whatever cause, it is very difficult to cure even in the beginning. The method Mr. Bartler prescribes on this occasion, is, in my opinion, a very rational one: which is, to let the horse be bled and rowelled at proper intervals, except the eye appears to be in the condition I hinted above. Should he be feverish, he must be treated accordingly, and have nitre given him, as before directed. Then let him have for three mornings running, two drams of calomel made into a ball, with conserve of roses, or honey and flour, and after that the following purge: viz.

Take an ounce of sacotorine aloes (and, should the horse be hard to work upon, an additional quantity of two drams, or four more) an ounce of cream of tartar, and forty drops of oil of aniseeds. Make these into a ball, with liquorice-powder and syrup of buckthorn.

Should the horse be no better four or five days after, repeat the calomel, and work it off.

off in the same manner. If the eyes be not sunk, it would be adviseable to tie up the temporal arteries, which I have sometimes found to be of service: tho' to be ingenuous, I must own, that there is scarce one horse in a hundred, whose eyes are thus affected, that ever recovers his sight, tho' he may not go directly blind. After having gone through physicking, it will be proper to give half an ounce of liver of antimony once a day in the corn for some time, in order to thin the blood, and break through the obstructions.

As for the hawes, these are obvious to every one. I shall therefore only hint, that care must be taken not to cut them too close, and that the wound be dressed with honey of roses.



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CH A P. IV.

Of the STRANGLES and VIVES.

THE Strangles and Vives being disorders sufficiently known, I shall be as concise in regard of them as possible. Should the strangles be accompanied with a fever, it will be proper to give white water with oatmeal, and an ounce of nitre twice a day, together with mashies of bran, oats, or barley. The changing the food will prevent its palling the stomach. In case of costiveness, let a clyster be administered between whiles. I should not advise bleeding, unless the fever runs high, and the swelling threatens a suffocation. If so, let a moderate quantity of blood be drawn away and a poultice applied to it twice a day, till it be brought to a suppuration. Then, as soon as it becomes soft to the touch, let it be opened, and afterwards dressed with the following ointment: viz.

Take half a pound of leaf tobacco. Boil this in a quart of red wine, till half is consumed. Then strain it off, and add half a pound of linseed, reduced to a fine powder, half a pound of oil, two ounces of bees-wax, four ounces of resin, and ginger and round birthwort of each an ounce. Mix, and make the whole into an ointment.

Let some of this be spread upon some flax, and laid on the swelling, and the poultice still continued

tinued over it, in order to promote a favourable digestion of the matter forming underneath, and to prevent any hardness accruing, which might otherwise supervene.

Sometimes this disease is attended with a running at the nose, which, if of any long continuance, may bring on the glanders. In order to obviate this incident, let a pint be given morning and evening of the following drink: viz.

Take oak-bark, shavings of hartshorn, and guaiacum-wood, of each half a pound, two handfuls of shepherd's purse, roots of snake-weed, and tormentils, of each a quarter of a pound. Boil the ingredients in six quarts of lime-water to the consumption of a third part. Then strain off the remainder.

To every pint of this decoction may be added forty or fifty drops of the balsam which I have directed for wounds, which will be of great service. Nothing can be better calculated for the relief of the disorder before us than this drink, inasmuch as it will deterge, heal, and restrain those glandular discharges. After the horse is recovered, I would advise the turning him immediately upon a salt marsh, for three weeks or a month. But, if this be impracticable, let him have liver of antimony, sulphur, and fenugreek, to the quantity of half an ounce in the whole, once a day for a fortnight; and let his corn be wetted, during this process, with chamber-lye.

The vives only differ from the stranglers, inasmuch as they seldom or never arrive at such a pitch,

pitch as to form a suppurative matter, but go off gradually by perspiration, and the application of hot goose-grease, or of ointment of marsh-mallows, and warm clothing. But, should there be a gathering of matter, it must be discharged by making an incision, and the same manner of treatment is to be observed as was above directed in regard of the strangles. However, as the glands in this disorder are sometimes more difficult to heal than they are when affected by the other, I would in that case advise firing. The reason why I have recommended goose-grease so much in swellings is, because it is of a more penetrating nature than common oil, or any other grease I know of. Its efficacy is demonstrated from the great powers it is endued with, of removing the swellings incident to womens breasts; and curing the canker in the mouth, by only rubbing the outside of the jaws with it.



CHAP. V.

Of the GLANDERS.

I LOOK upon it altogether unnecessary to expatiate on the Glanders, as so many authors are extant that have handled this subject, though, indeed, to so little purpose, that not one, who has hitherto delivered his sentiments concerning this disorder, has been able to give us the least probability of accomplishing an effectual cure of it. Monsieur La Fosse, farrier to the French king, is the last of this class of writers, who applauds himself to a great degree, for having been, as he insinuates, the first that has pointed out the true seat of the glanders. He is the first, I will allow, who ever proposed relieving them by trepanning, which is all the glory he can really arrogate to himself on this occasion. For, as to the cause or seat of the Glanders, Dr. Bracken, I think, has set those articles in full as good a light as La Fosse has done: And as to the treatment of them, our French author is only singular in directing a hole to be made in the head, in order to throw in an injection; which, from the observations I have made, in respect of trepanning horses affected with the real glanders, must, I am confident, turn out as fruitless and abortive as any other method whatever. Now a horse is really glandered, when the glands situated in the pituitary membrane become greatly relaxed, together with ulcers formed in their texture, and in the membrane, and soft spongy bones, occasioned

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unavoidably by the sharp corrosive matter that is continually preying upon those substances.

The glanders are easily distinguished, either from a discharge from the lungs, or from an evacuation of phlegmatic matter, in consequence of a cold, the strangles, or a fever: The slime that is voided being of a dark yellow, green, or black colour, and so fetid, that it is almost intolerable to the smell.

Sometimes, indeed, a severe cold and a fever are attended with a discharge of yellow, or else green, matter, and of what will now-and-then be tinged with blood; together with swellings under the sides of the jaws, in the same manner as in the glanders. Now though these are very bad symptoms, yet, by proper exercise, and clean feeding, the blood may recover its balsamic quality, the inflammation and irritation be removed, and the relaxed glands braced up before any ulcers can be formed, and consequently a cure effected of the disorder: whereas, on the contrary, were no regard had either to the exercise or feeding, the horse would almost inevitably become glandered. I can by no means fall in with the sentiments of Monsr. La Fosse, who is of opinion, that the blood in the glanders is by no means faulty, and that no stress is to be laid on inward medicines. Now, in reality, the blood in this case must be very much vitiated, and full of salt acrid particles; as is evident from the ulcerations caused in the glandular part of the head.

In order to the relief of this distemper, I would advise the remedies I have directed for colds and the strangles. On failure of these, let recourse
be

be had to salt-mashes, which is the only expedient left, that can carry along with it the least probability of bringing about a cure. Should the reader be curious of seeing a farther discussion of the glanders, I refer him to Dr. Bracken's translation of Monf. La Fosse's Treatise, and his remarks on it, though I am afraid not one will be able to ascertain any cure, when once confirmed to be a real glanders.



CHAP.

CHAP. VI.

Of a COUGH or COLD.

ALL colds proceed from an obstruction of perspiration, which arises either from suffering the horse to cool too soon when overheated, or from giving him cold water when hot, or from a bad quality in the air. For whatever shuts up the pores of the skin so as to hinder the blood from discharging the superfluous matter, that should go off by those passages, must of course produce a more than ordinary plenitude in the vessels; which plenitude affecting the lungs to an uncommon degree, makes them press hard upon the aspera arteria, whereby is brought on a difficult respiration. Now, in order to procure a greater liberty for the blood to circulate, it will be necessary to take away a moderate quantity of it, and then to thin and cool the rest with nitre, and to keep the body open with a few mashes, and a little sulphur mixed with them. This treatment at first with proper exercise will generally succeed. But, should the cough be too obstinate to be removed by this management, prepare the following composition; viz.

Take groundsel, ground-ivy, and rosemary, of each two double handfuls, half a pound of elecampane root well washed and slit, three single handfuls of rue, four heads of garlick, a quarter of a pound of liquorice.

quorice-root, and two ounces of corn-poppies. Boil these ingredients in ten quarts of spring water till three quarts are consumed. Then strain off the remainder, and add to it two pounds of honey, one pound of treacle, gentian-root in powder, and turmeric of each four ounces, six ounces of powder of anniseed, half a pound of flour of sulphur, half a pound of sugar-candy, and four ounces of tar. Mix all together, and keep it well stopped for use.

Of this give a pint once a day for a week or longer, till the cough is removed. To the first two or three pints may be added an ounce or two of cold-drawn linseed-oil. Nothing can be better calculated for the relief of a cough than this drink, it being not only balsamic and vulnerary, but endued likewise with detergent and diuretic faculties.



CHAP. VII.

Of an ASTHMA.

AN asthma is a difficulty of breathing, attended with a short phthisicky cough arising from several causes. For whatever occasions the ambiens air to enter the lungs with less freedom than usual, brings on this disease. Now, for performing respiration, first the thorax must be dilated, which is effected by the actions of the diaphragm and intercostal and abdominal muscles. In the next place, the air must be received into the aspera arteria; and therefore, whenever this duct or its ramifications are obstructed, either by a tumor, or by viscid humours, a difficulty of breathing must ensue. Then the air itself comes in for a partial cause. For if it be much heavier or lighter than usual, it does not distend the vesicles of the lungs with sufficient force; and sometimes it proceeds from a nervous cause. However, let the cause be what it will, bleeding will always be proper. Should the horse cough more than ordinary, which frequently is the case after hard riding, and especially if he has stood long in the stable without exercise, exercise on this occasion, together with feeding him very moderately, and watering him sparingly and often, will be the most direct means of recovering him from his disorder. When the cough is very severe upon him, let a vein be immediately opened. Care all along must be taken not to administer any heating medicines, or strong purges, which

which are very pernicious in this malady, as they are, indeed, generally in any other. In lieu of these, let half an ounce of liver of antimony be given him with sulphur and fœnugreek-seeds once a day in his corn, which must be always wetted with chamber-lie. Should costiveness accompany either a cold, or this disorder, a gentle purging clyster will be very adviseable.

A broken wind, though it proceeds very often from some of the same causes, differs from an asthma, inasmuch as in a broken wind there is a continual heaving of the flanks, in an asthma not so. On the contrary, by sucking in a pure air, an asthmatic horse will sometimes breathe freely.

As broken winds are under an impossibility of being cured, I shall direct no medicines through a specious pretence of relieving them: the balls and drinks advertised on this occasion being monstrous impositions on the public. Mr. Gibson, on opening horses that were broken-winded, has found their hearts and lungs much larger than those of other horses, which, indeed, I myself have frequently observed, the lungs in the mean while being free from ulcerations. Now, to the preternatural size of these organs may be attributed one cause of this disorder; which largeness is often owing to the feeding horses up too fast; from whence the vessels, being loaded with more blood than can be readily carried on by the laws of circulation, must of course be distended and acquire a greater bulk. Hence arises an impediment in regard of the expansion of the lungs, and consequently a difficult respiration; which circumstance is equivalent to a

horse being narrow chested, which often affects his wind to a great degree. A broken wind is the frequent consequence likewise of riding a horse too hard upon a full stomach; the weight of which pressing against the midriff prevents the lungs from having a free liberty of performing their natural functions.

The next thing to be considered is the manner in which the wind is broken. It is either by a sudden stoppage, or by a gradual decrease of the wind. The former is the most dangerous, and is attended with great pain and difficulty of breathing. The latter is the most common, and is attended with less pain and difficulty of breathing.

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The symptoms of a fever in general are, a great restlessness, a more than ordinary beating of the flanks, a redness and inflammation of the eyes, a high pulse, a parched and dry tongue, a hot mouth, and sinking breath; which last symptom shews it inclines to degenerate into the putrid state. As food of whatever kind is apt to be transformed to a horse in this condition, he is by no means to be pressed to eat.

The best intention of cure in all fevers is to be directed according to the urgency of the fever, and the strength and age of the horse. After blood

C H A P. VIII.

OF FEVERS in General.

ALL fevers, of what kind soever, are attended with a preternatural heat of the blood and humours, which impairs the bodily strength, and the vital actions. Now all fevers require some considerable evacuation, either natural, or caused by art; and it is incumbent on farriers to have an eye on the way nature seems to affect for the expulsion of the morbid matter, in order to assist her by all means possible. Now, the discharge of this matter is very frequently made by several outlets of the body at a time; and, consequently, an evacuation by one outlet must check that which makes its exit by means of another. On which account, it is necessary to consider what kind of evacuation may be likely to be most serviceable, in order to have a particular regard to that.

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The first intention of cure in all fevers is to bleed according to the urgency of the fever, and the strength and age of the horse. After bleed-

ing, let a clyster be administered, consisting of fat broth, half a pint of common oil, and a handful of salt: which, by boiling a few mallows in it, and some linseed, will turn out still of more service. All heating things are to be carefully avoided. Instead of these, let an ounce of nitre be given, dissolved in a strong decoction of scordium, twice a day, the body in the mean while being kept open with a few mashes. This treatment strictly adhered to will in regard of most common causes effect a cure. But should the fever be of a complicated kind, and the horse have the least cough upon him, let him be dosed twice a day with the following mixture, viz.

Take three ounces of cold-drawn linseed oil, three or four ounces of honey, and an ounce of cream or salt of tartar.

In case there appear any eruptive disorder on his body, which indicates a malignant quality in the blood and juices, let him be supplied twice a day (for three, four, or five days, as occasion may require) with a dram or two of the following powder, viz.

Take half a pound of hartshorn shavings, and boil them in spring water for an hour or more. Then take them out, and put them upon a large dish before the fire, till they become dry enough to be reduced to a powder. After powdering them, add an equal weight of powder of antimony, and mix them together in a small iron saucepan.

Then

Then set the mixture over a slow fire, and keep stirring, till there remains no smoke. Then take it off, and there will be a white powder, which keep very close stopped up in a glass bottle with a glass stopper.

This powder, which is a sovereign remedy in fevers of a malignant nature, may be given made up in a ball with honey and liquorice powder, and washed down with two or three horns full of decoction of scordium. Should there be prevailing a great restlessness, together with a high pulse, it will be adviseable to give half a dram of liquid laudanum in the decoction, which will compose and quiet the tumult raised in the blood and spirits. In case there be a running at the nose, which is a good sign, it must be encouraged by keeping the head warm. Sometimes the glands about the throat will be swelled, which are to be treated in the same manner as is set down in the strangles, and, if they come to suppurate, they are to be dressed the same way. A discharge of this nature, instead of being obstructed, must be ever promoted, as it is an effort of the constitution to get rid by this means of the noxious matter it abounds with. Plenty of warm water is to be given in this case with a good deal of barley-meal in it, and now and then a little honey.

A fever is sometimes attended with a pleurisy, and an inflammation of the lungs, or peripneumony; which in regard of their symptoms very much resemble each other. In a pleurisy, the fever, which at first is moderate, rises suddenly

ing, let a clyster be administered, consisting of fat broth, half a pint of common oil, and a handfull of salt: which, by boiling a few mallows in it, and some linseed, will turn out still of more service. All heating things are to be carefully avoided. Instead of these, let an ounce of nitre be given, dissolved in a strong decoction of scordium, twice a day, the body in the mean while being kept open with a few mashes. This treatment strictly adhered to will in regard of most common causes effect a cure. But should the feyer be of a complicated kind, and the horse have the least cough upon him, let him be dosed twice a day with the following mixture, viz.

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very high. In the beginning the horse often strives to lie down, but starts up again immediately, and frequently turns his head towards the affected side; which Mr. Gibson says has caused many to mistake it for the gripes. Though, by the bye, it is so different, that, in my opinion, it is next kin to an impossibility for a person conversant even with the least practice imaginable, and not absolutely stupid, to take this for those.

As to what regards a pleurisy and a peripneumony, or an inflammation of the lungs; in a pleurisy the horse heaves, and works violently at his flanks, is very restless, his belly at the same time for the most part tucked up, his mouth hot, dry, and parched. In an inflammation of the lungs, his mouth is more upon a slimy order, which slime, when the mouth is open, discharges itself in abundance. A reddish or yellowish water oozes likewise from the nose, which sticks like glue to the inside of his nostrils. When this matter comes away in large quantities, and changes to a pretty good consistence, it is a favourable prognostic. In an inflammation of the lungs, the belly always looks stuffed and full, and the working of the flanks is more regular, unless after drinking, when the horse will be still shifting his posture, with his ears and feet for the most part cold, and often in damp sweats, which are very dangerous symptoms.

The cure of both these disorders depends principally on bleeding, and that repeated according to the degree and urgency of them, and the strength and age of the horse. Let two rowels at the same time be put in on each side of
the

the breast, and half a pint be given three or four times a day of the following decoction, viz.

Take half a pound of snake-root, a quart of common barley, a quarter of a pound of liquorice root, and a pound of figs. Boil these in two gallons of spring water, for half an hour or more. Then strain off, and add a pound of honey, and a pound of cold-drawn linseed oil. To each half pint of this mixture add an ounce of nitre, which I have sometimes accompanied with a little lemon juice or vinegar.

Let the mouth be also washed five or six times a day with honey and vinegar : and were there an addition of two ounces of the flowers of corn poppies to the ingredients for the decoction, some farther benefit might be the result of it : as I myself have experienced these flowers, when dried and powdered, to have produced a cure on some occasions independently of any other medicine.

Should the horse, notwithstanding this treatment, still remain diseased, ply him once or twice a day with a clyster composed of marsh mallows, linseed, the herb mercury, and fennel seeds ; to a decoction of which add linseed oil, and cream of tartar, in a just proportion.

As to sweating a horse in a fever, that affair requires great sagacity and circumspection. An attempt to produce this effect by internal medicines of a heating quality, would be quite preposterous ; as medicines of that nature would

only turn out a means of draining off the thin serum of the blood, and consequently leave the remainder of the mass in a state too viscid to circulate for want of proper dilution. Instead therefore of directing heating and pernicious inward medicines, I shall produce a few instances, where I have succeeded by raising a sweat by outward applications; which, when judiciously made use of, will be of relief not only in fevers, but also in paralytic and convulsive disorders.

In the year 1748 I had the honour of being recommended by Sir John Ligonier, in whose service I was, to be groom to the king of Sardinia. In September I set out from Holland in order to pass through Germany with the king's horses. On my arrival at Luxembourg, I had one of the horses taken ill with a fever. I began with bleeding, and cooling laxative clysters, and administered the antimonial fever powder. There came now a great stiffness on the external muscles of his breast and shoulders, insomuch that he was incapable of putting his legs from under him, or of lying down, though not in the least affected with a pleurisy. I soon got the better of the fever, and my greatest solicitude now was how to remove this stiffness. Having fourteen horses under my care, and a long way to travel, I considered the great expences and other inconveniencies I must have been necessarily subjected to from lying still, and being for any time retarded in my march. These reflections put me on thinking of every thing that might carry with it the greatest probability of a speedy relief.

Physic,

Physic, I knew, would only weaken him more; and, as for rowels, though they might have been of service, those would have been too tedious. At last I thought of raising a sweat by outward application; and calling to mind the manner of the running grooms sweating themselves in order to waste for riding, I resolved to try immediately the following expedient. I covered the horse all over with blankets, letting them be open under his belly, and got three little earthen pots, and, filling them with spirits of wine, set them on the ground under his belly: and, to divide the flames and make them ascend more gradually, I placed a square piece of matting not too thick betwixt the horse and the flames. The matting rested upon four short sticks nailed at each corner. I soon raised a laudable sweat, and kept it up for three quarters of an hour. I then removed the spirits, and took off the wet blankets, and kept the horse warm that day and the following night; and on the next morning I found the stiffness intirely removed, and a free liberty of motion restored to all the limbs. So that I had no farther obstruction to the prosecution of my journey, and accordingly set off without delay. In the year 1754, on going through France to the same place with the earl of Rochford's and the king's horses, at Baboun I had one of the horses seized with a fever of the malignant kind, attended with a pleurisy. I was under a necessity of bleeding him eight times in four days. I also put in two rowels, one on each side of his breast, administered cooling, laxative clysters, and gave him

the mixture of linseed-oil, honey, and nitre, and sometimes added nitre to his clysters. In three days time his fever abated, and he began to discharge a sharp, corrosive matter by the nose, that was sometimes yellow, sometimes green, and now and then tinged with blood. I then omitted the mixture, and gave him thrice a day two drams of the antimonial fever preparation, and washed it down with a decoction of scordium and valerian root; and, as he was very restless, I added some flowers of red corn poppies. This method I found took effect. For in four days time I proceeded on my journey, though he had eat nothing for eight days, but what I had thrown down by the horn. I only marched six or seven miles a day, till he had recovered strength, which, indeed, daily increased. And now I thought all danger over. But I had not gone above two hundred miles before he was took with a contraction of his muscles, so that he could not move out of the stable; and at the same time there appeared a great many small lumps all over his body. Now, as such good success attended my sweating the horse before-mentioned, I immediately went to work in the same manner with this; and the next morning gave him a pretty large dose of my diuretic balls, on purpose to break the viscid cohesion of the blood, and to render it more fit for circulation. My intention was intirely answered; and accordingly I was enabled to proceed on my journey, the horse getting up as well as any of the rest. In Savoy I was obliged to have recourse to the same method of sweating, which on that occasion equally succeeded.

I hope

I hope the reader will excuse me for the recital of these instances, as they are produced only from a motive of confirming by matters of fact the practice I take upon me to recommend, which I am confident will ever be of benefit on similar occasions.

There is another disorder attendant sometimes on a fever, which is a swelling of the legs, from whence oozes a sort of sharp thin matter through the pores of the skin. This swelling generally arises from a weakness of the whole muscular motion, in consequence of the evacuations necessary for the lowering the fever. The intention of cure depends intirely on bracing up the relaxed muscles of the legs, and on thinning the matter already settled there, so as to render it fit for circulation. My expectations on these occasions have generally been answered by gentle exercise and the following pultice, or charge. viz.

Take a pint of old verjuice, and a handful of currier's shavings. Boil these to a thickness. Then add a handful or two of fuller's-earth, two ounces of double camphorated spirits of wine, and the whites of four eggs:

Let this be applied on the horse's return from his exercise, which must consist in being walked out three or four hours a day. The pultice is to be renewed every day, till the swelling is intirely removed. During the application of this pultice, or charge, it will be adviseable to keep the foot stopt up, and, in order to prevent any matter from settling in the foot, to surround the hoof with the following mixture, viz.

Take

Take some chamber-lie, hogs-dung, fuller's-earth, and goose-grease. Boil these well together, and then take them off from the fire, and add a small quantity of opodeldoc.

This will insinuate itself into the fluids, and dissolve any coagulation settled in the foot, which is the forerunner of what is called foundering in the feet. It likewise removes any inflammation of the part, while the charge braces up the relaxed vessels.



C H A P. IX.

Of the COLIC, or GRIPES.

THE colic is a violent pain in the intestines, from a too great distension, irritation, or solution of continuity in regard of their fibres. The colic is divided into three kinds, viz the flatulent or windy, the bilious or inflammatory, and the dry colic. The flatulent colic is occasioned by wind being pent up in the bowels, the consequence of letting a horse drink cold water when hot, or suffering him to eat green herbage of a very flatulent nature : and oftentimes it proceeds from a sudden stoppage of perspiration. The signs accompanying this malady are these, viz. The horse is frequently lying down, and immediately rising up again with a spring. He strikes his belly with his hind-feet, and stamps with his forefeet, and refuses his meat. When the disorder is carried to a more painful pitch than ordinary, he becomes sometimes convulsed, his eyes being turned up, and his limbs stretched out, his ears and feet sometimes hot, and sometimes cold. During its continuance, he now falls into profuse sweats, and then into cold damps, strives often to stale, and turns his head frequently to his flanks. He then falls down, rolls about, and often turns on his back. Another sign to be added to these is a stoppage of his urine, occasioned by a load of dung pressing hard upon the neck of the bladder. Now, the first thing to be

be done in this case is to give him the following draught:

Take spring water two quarts, common salt six ounces, soft soap two ounces; which simmer gently over a fire, till one pint is consumed; which give luke-warm. Should he be costive, let him be raked, and a clyster of the same be given: this drink and clyster will, I am informed, cure ninety-nine out of a hundred. As for gin, pepper, oil of turpentine, philonium romanum, and all heating things, given in any colic, they will always be attended with the worst of consequences.

When the extraordinary violence of the malady threatens an inflammation of the parts, it would be adviseable to take away a proportioned quantity of blood, in order to prevent such a contingency. If the horse stales, it is a sign of his getting ease in a short time. I have known guts taken from a chicken or pullet cut open alive, and given to a horse labouring under this severe malady, to procure immediate relief, and that frequently.

Should the horse be loose in his body, a clyster of the lenient kind, with a little opium added to it, will help to quiet the bowels, and put a bar to the irritation, which, perhaps, may be the cause of that circumstance. If the body be hot, two ounces of nitre must be mixed with the clyster.

The symptoms of a bilious colic very much resemble those of a flatulent one. They are only attended

attended with a greater degree of heat, and the horse voids a little loose dung, accompanied with a scalding urine. When the urine is blackish, or of a reddish colour, and of a fetid smell, an approaching mortification ought to be apprehended, which generally ends in death. In this case, blood is immediately to be drawn away to the quantity of three or four quarts, and the bleeding repeated according to the urgency of the symptoms. All irritating and hot things are to be carefully avoided in this colic. The above specified drink will be of the most service with twenty of the balsamic drops in it: but the soap that enters its composition must be omitted, and the oil of turpentine. And the emollient clyster is to be administered with the nitre in it. The water that is drank should also have some gum arabic dissolved in it, and taken from a trough that has chalk lodged at the bottom of it, to impregnate the water with smooth absorbent particles: and, in order to procure some loose stools, three or four times a day let a pint be given of the following mixture, viz.

Take six ounces of sena, and two ounces of cream of tartar. Infuse these in three quarts of water to the consumption of a third part. Then strain off the remainder, and add to it four ounces of lenitive electuary, and six ounces of Epfom salts.

Should the fever notwithstanding this management increase, and the urine still appear flesh-coloured and ruddy, the disease for the most part turns

turns out fatal. To prevent a mortification in this case, let a pint be given every three hours of the following medicine, viz.

Take a pound of oak-bark, and four ounces of rough jesuits-bark. Boil these very slowly in four quarts of forge water, till one quart is consumed. Then add two ounces of diascordium, and mix it well with the decoction.

Should there be a flux in the case, let the astringent clyster be administered that is directed in a diarrhoea, but not so often.

In regard of the dry gripes, when a horse happens to be costive, he is to be raked, as I have elsewhere intimated, and have an emollient, and at the same time an opening clyster given him, together with the purging drink.

One caution I shall recommend in this place as absolutely necessary, which is, never to recur to hot stimulating remedies, when a horse is costive, under the notion of expelling wind; as this sort of treatment must unavoidably aggravate the disorder, and, indeed, soon put an end to his life, of which I have been an eye witness more than once. Nor, in reality, would it be advisable to ply a horse with hot, and consequently inflammatory medicines, even in a flatulent colic, without mixing some oil with them, to supple and relax the intestines at the same time; and by that means to guard against consequences, that would be very justly to be apprehended without this circumspection.

CHAP. X.

Concerning a DIABETES.

A Diabetes proceeds from too great and too quick a secretion and excretion of liquids very little changed, or partaking little or nothing of urine either as to colour or smell, and endued with a remarkable sweetness, and is attended with a total relaxation of the kidneys, from the constant pressure of the water falling on them.

Mr. Reeves, treating on this disorder, censures Mr. Gibson's method of handling it, intimating that his medicines bind the body, and are only fit for a looseness: whereas, says he, you should give such things as will act as an astringent on the kidneys, and not give such things as will act as an astringent to the body. On which occasion he recommends the bark, roach-alum, smiths forge-water, lime-water, &c. Now, can any thing in nature be so merry as this conduct of his in recommending the very remedies he is virulently inveighing against? Is the action of the bark, alum, &c. confined absolutely to the bracing of the kidneys? And, were this allowed to be matter of fact, are there no concurring circumstances, in regard of the producing this distemper, to be considered as proper objects of astringent medicines? Before Mr. Reeves writes again, I would advise him to become sedate and serious, as every reader is not endued with a taste sufficient to relish such a long scroll of rhodomontade.

As

As to the relief of this disorder, the method I have always found best to answer my expectations in respect of it, is the following, viz. In the first place I order a large quantity of chalk to be put in a tub of water, a little of which water at a time thus impregnated with chalk is to be the horse's common drink. Then I injoin the following decoction, viz.

Take ten pounds of unslacked lime, and pour on it six gallons of boiling water. When the ebullition is over, and the lime settled, philter the liquor, and add to it half a pound of liquorice, oak-bark and the bark fassafra, of each half a pound, two pounds of raisins of the sun, and two ounces of ginger. Infuse these ingredients without heat for two or three days. If it be requisite to render the composition more astringent, add to it half a pound more of the oak-bark.

This, without any farther parade, whatever complicated means authors may take upon them to recommend for the cure of this disorder, will abundantly answer the intention of removing it.



C H A P. XI.

Of the LAX and SCOURING.

IT is no easy matter to form a proper judgment when a looseness in a horse ought to be checked, and when encouraged. However, it may not be amiss to suggest a few general hints in respect of this matter. If therefore a healthful horse, upon catching cold, or in consequence of hard-riding, over-feeding, eating bad food, or being seized with a slight fever, should have a moderate purging upon him, let it by no means be stopped, but rather encouraged by an open diet, and plenty of warm water with oatmeal in it. But should it be of any long continuance, with a loss of appetite, and wasting of the flesh, it must be regulated immediately by suitable medicines. Should great quantities of slime be evacuated, and greasy matter, it will be advisable to give the following dose, viz:

Take lenitive electuary and cream of tartar, of each three ounces (or more, according to the horse's constitution) an ounce of resin finely powdered, and three or four ounces of linseed-oil.

Let this be repeated every other day for three days, if occasion requires it; or, in lieu of it, may be given every third day the following ball, viz.

Take

Take half an ounce, or more, of aloes, gentian-root, round birthwort, myrrh, bayberries, and shavings of hartshorn, all finely powdered, of each a dram and a half, and half an ounce of rhubarb. Make these up into a ball with honey, adding forty drops of oil of aniseed, or amber.

Should there be a fever attending, the above dose will be proper without the resin in its composition; and at night, when it has done working, an ounce of diascordium and a dram of cinnamon given in a pint of forge-water, or mint-water, will be of service.

In case the horse be grown worse, and his belly and flanks are become full and distended, together with an appearance of his being griped and in pain, let him have the following clyster, viz.

Take linseed to the quantity of four or five ounces. Boil it in three quarts of water till half is consumed. Then add two ounces of starch, and a dram of opium.

This I have experienced to be of admirable effect; as by its mucilaginous quality it blunts the sharp irritating particles that are constantly solliciting the guts to a discharge of their mucus, while its opiate one is in the mean while alleviating the pain that excruciates them. Violently astringent things in the beginning are to be avoided, nature requiring to be reinstated gradually.

But

But where the case is desperate, recourse must be had to desperate remedies. On this occasion I recommend the following astringent clyster, viz.

Take four ounces of oak-bark, roots of tormentil and wolf's-claw, of each two ounces, and an ounce or two of armenian bole. Boil these in three quarts of forge-water, till half is consumed. Then strain off the remainder, and add three ounces of starch, and a dram of opium.

I have also in the like circumstances found great service from the following drink, viz.

Take three ounces of oak-bark, roots of tormentil and wolf's-claw, of each an ounce, shepherd's-purse and five-fingered-grass, of each a handful. Boil these ingredients in three pints of forge-water till half is consumed. Then strain off the residue, and add to it Armenian bole and soft chalk, of each half an ounce, and an ounce of diascordium. Let half of this be given in the morning, and the other half at night, and repeated as occasion may require.

Gum arabic is to be dissolved in the water the horse drinks, and chalk to be made use of in the manner directed above. It is observable, that scourings, consequent to long protracted sicknesses, such as the farcy, putrid fevers, or an inflammatory state of the blood, where proper bleedings have been neglected, generally prove fatal; especially

especially in case the discharge be a fetid slime of a brown dirty colour, and the matter that runs from the nose in some measure resemble it. For these are signs of an intire dissolution in respect of the texture of the blood, and of a putridity affecting the whole mass of fluids.

Some horses have naturally weak stomachs and bowels, and throw out their aliment indigested. Their dung is habitually soft, and of a pale colour. They feed poorly, and get very little flesh. In this case, some advise gentle purges, and a stomach-drink. But, for my part, I am of opinion, that where these incidents flow from a natural disposition, all remedies whatever will turn out abortive. And, indeed, I never yet have found relief from any thing. All I can advise is to let the work be gentle, and the feeds very moderate at a time, that the stomach may the better digest them, and to give now and then some Armenian bole and soft chalk, made into a ball with a strong decoction of hartshorn and bean-flour.

When horses are apt to be costive, if the costiveness be not habitual, they should be raked, and have a clyster given them, and a gentle purge or two. But where it is habitual, and the horse in good health, no inconveniency will arise from it. A little wheat and rye may on this occasion be mixed with his feeds, which will cool and open his body.

CH A P. XII.

OF WORMS.

ALL worms are bred from eggs which the horse takes in with his food, or from insects floating in the air that he imbibes. The surest signs, by which we may know when a horse is troubled with these, are, next to that of voiding them, the following. He eats plentifully of good food, yet never thrives; often strikes his feet against his belly; and is continually rubbing his tail, with his coat staring as if he were surfeited.

Worms are divided into three classes: the first are Bots, which young horses are most subject to: the next are Ascarides, a small red sort with heads about an inch long, and no thicker than a needle. The third kind are the Rotundi, that bear a resemblance to earthworms. Now, the first sort are generally the cause of convulsions, by fixing themselves in such a manner on the coats of the stomach, as to wound its muscular parts. I cannot help taking notice of the remarks the learned Daniel Le Olerc has made concerning this creature, which seems to be an animal of a singular nature. "First," says he, "it appears manifestly, that this is not a single worm, but a chain of many lesser worms of that kind which are called Cucurbitine, linked together in a continued series. Secondly, these latter are sometimes found of a finger's breadth, lying single and separate in the intestines, and are so discharged by the anus. Lastly,

Lastly, the whole worm formed by the concatenation of these has but one head, which is pretty sharp-pointed, somewhat resembling a beak, which it fixes into the coats of the intestines, and, sticking there very fast, sucks the chyle for its nourishment." Thus far Mr. Le Clerc.

Now the cure in regard of all these sorts of worms depends principally on mercurials. First then, I let the horse fast six hours in the afternoon, and at night I give him two drams of calomel, made into a ball with honey and flour, and wash it down with three pints of sweet-wort, if I can get it; if not, with new milk and honey; and the next morning I order the following purge; viz.

Take an ounce, or more, (according to the strength of the horse) of aloes, half an ounce of cream of tartar, a dram of jalap, a dram of oil of savine, half an ounce of aniseeds in powder, and forty drops of oil of aniseeds. Let these be made into a ball, with syrup of buckthorn, and given once a week while it is judged proper. After the horse has been purged, let him have a ball every morning for a month or longer, of the following composition; viz.

Take four heads of garlick, rue, savine, and box, cut small, of each two handfuls; three ounces of tanley-seeds; half a pound of filings of tin, finely powdered; fœnugreek-seeds and liquorice-power, of each three ounces; two ounces of sea-coralline, and with

with a sufficient quantity of honey, make the whole into balls.

The following paragraphs relating to Bot-worms were communicated to me by Mr. Wall, a surgeon of Christ's Hospital, and of the Small-Pox Hospital, which I flatter myself will be very agreeable to the Reader, as they are frequently incident to Horses, and have not been properly taken notice of hitherto by any Writer on Farriery.

MONSIEUR Bourgelat, riding-master of the academy of Lyons, and author of *Les Elements d'Hippiatrique*, on dissecting a horse found in its abdomen a worm attached to the outward part of the intestines. He sent to the royal academy of sciences at Paris a very singular description of this worm, with many odd deductions, tending to prove its generation equivocal. About six years ago this discovery was much canvassed in France, and Monsieur Bourgelat was received a correspondent to that academy for this supposed discovery.

The following observation seems to set the difficulty, of how this worm got to the outside of the horse's intestines, in a clear light.

Last winter, a gentleman of Dr. Demainbray's acquaintance, had a very fine horse, which being suddenly taken ill, in two or three days had the symptoms of an ascites, and died in a week's time. On dissecting it, a large quantity of water was found in the cavity of its abdomen. On opening the stomach, it was discovered to be re-

plete with bot worms, which had devoured the greatest part of the internal coat of it; whilst some of them had pierced through all the coats of the stomach at the pylorus, and made it appear like a honeycomb. Several of these bot-worms were fastened to the outside of the intestines.

Beyond dispute, had not the stomach been dissected, this would have been a corroboration of Mons. Bourgelat's discovery; and had that gentleman dissected his horse's stomach, he would have found how this extraordinary worm came to be fastened to the outside of the gut.

The bot-worm is the offspring of a fly, which is only found in open places. For this reason horses that go to grass, or are kept in the country in stables near open places, are more subject to this disease, than those that are kept altogether in the stable in town.

When this fly wants to deposit its eggs, it gets under the horse's tail, creeps into the anus, and glues its ova to the internal coat of the rectum so fast, that the dung in its passage cannot rub them off. They are there hatched, and produce a worm composed of several rings furnished with short strong bristles, so disposed as to hinder its going backwards, but to facilitate its progress up the intestines of the horse towards his stomach, where it finds its proper food. This worm has two strong unciform teeth placed horizontally, by means of which, it fastens itself to the inside of the intestines so strongly, that it requires a considerable force to pull it off when alive.

These worms remain in the stomach and intestines of the horse till such time as they are turned

turned to their nymph state, and then, being voided, are changed into the same sort of fly as their mother. But in case numbers of them are not destroyed by the common methods used for the cure of this disease, when they come near to their full growth, not finding a sufficient quantity of food in the stomach, they generally with their teeth make a way through the coats of it, and get into the abdomen in search of food, and destroy the horse, as above.

The symptoms of this disorder are as follow, viz. As soon as these worms are hatched, they for the most part make their appearance about the anus immediately after the horse has dunged. They likewise cause a continual itching about the anus, which makes the horse rub his tail against the stall, or any thing near him. In their progress towards the stomach they make the horse very uneasy, which he shews, by often turning his head towards his belly, and striking it with his hind foot. When they are got into the stomach, the same symptoms continue, together with a stamping of the fore feet and a yawning, which last is a certain sign of botts being lodged in the stomach. This disease is also frequently attended with a short cough.

This worm, like the caterpillar, and most other worms, does not breathe by its mouth, but hath its organs of respiration opening on each side of every ring.

The caterpillar is almost instantaneously killed by pouring varnish upon it. Oils likewise have the same effect. This, I imagine, is brought about by the oil's entering these pores, if I may

for call them, in the action of inspiration, and stopping them up, which must necessarily produce an immediate suffocation.

From hence I should propose giving the horse large and frequently repeated doses of oil. Linseed oil I apprehend to be the best adapted to the answering our purpose on this occasion, as it approaches nearer to the nature of varnish than any other oil. This consequently might turn out not only an easier, but a more efficacious remedy likewise, than any that have hitherto been exhibited, in order to destroy those noxious insects.

The reason why I would give it in large and repeated doses is, because I apprehend, that, in case it were given in small quantities and at long intervals, the mucus of the stomach, and the bile and pancreatic juice mixing with the oil, would be apt to convert it to a kind of chyle, and deprive it of the unctuous property, by means of which it destroys these worms. Nor do I think it would be amiss to throw up a few clysters of the same oil, lest any of the worms should remain lodged in the large intestines, whither it is almost impossible for oil taken by the mouth to get, before it be assimilated by the juices of the stomach, and the small intestines joined in conjunction with the bile and fœcus pancreaticus.

I would afterwards give the horse a few doses of brisk purging physick, in order to clear the stomach and intestines of the dead worms; which, without this precaution, might lie there and putrify, and thereby produce a disease, perhaps as dangerous as the former.

It would, in my opinion, be worth while to try oil as a vermifuge in regard of the human body. For in case the worms bred in our intestines have the same apparatus for respiration as most other worms have, would not this medicine be likely to answer our intention better than mercurials, and other rough purgatives, generally made use of on these occasions, by which I am afraid many unhappy infants have been cut off in the earliest stage of life?

I have the greater reason to flatter myself with the success of this innocent remedy, as Baglivi, in the experiments he made on live worms taken from the human body, found that none of the vermifuge medicines destroyed the worms so soon as the putting them into oil.

This hint flowed to me from the study of natural history, under Dr. Demainbray, a study, which is, I am afraid, less cultivated in general than it deserves: inasmuch as it not only affords an agreeable entertainment to the curious, but also tends to the improvement of most arts and sciences, and is more particularly deserving the attention of students in medicine, as, by ascertaining the true nature of diseases and action of medicines, it may take off from that art the opprobrious name of *Ars Conjecturalis*." (Lam) 201 bns

Thus Mr. Wall. And, indeed, in respect of what he says concerning a horse's dying of botworms, which, on dissecting the horse, were discovered to have eat through the stomach, I myself, on opening a horse that died almost in the same manner in Flanders, where I had the honour of serving my lord Ligonier, found three

parts of the stomach full of botts, and its coats in four or five different places eaten through, which made it appear like a honey-comb; and between thirty and forty of these worms had got into the cavity of the abdomen, and fastened themselves to the coat of the intestines, and to the inside of the peritonæum.

Mr. Osmer in his treatise on horses hath given a cure for them, which I have not as yet made any experience of: but it seems to me to be very reasonable, which is as follows: "Take new milk one quart, honey half a pound; give the horse this in a morning, and let him fast after it one hour and a half; then give him a pint of strong brine, more or less, according to the size and strength of your horse, fasting after that another hour repeat this three or four successive mornings. This destroys them, and leaves no appearance but of their skins or shells, which are brought away with the excrement, and this will kill worms of all sorts and sizes."

Note, I should recomend beef-brine, as being least offensive to the stomach.

CHAPTER XIII.

Of the YELLOWS, or JAUNDICE.

THE colour of the eyes and mouth exhibits to every one undoubted marks of this disease, the horse in the mean while appearing very heavy and sluggish. The jaundice proceeds from an over-flowing of the bile, which is a kind of natural soap, being a mixture of oil, water, and salt, both volatile and fixed, separated from the blood in the liver, for various uses of the animal body. And as the blood itself may be vitiated many ways, it is no wonder, that this humour is sometimes rendered unfit for its office. Now it is often faulty on account of its lentor or viscosity, and sometimes also, in consequence of its excessive thinness. In the first case, the secretory glands of the bile are obstructed, and the small quantity of it, that is secreted, stagnates in the hepatic ducts, whence the liver grows hard, and under its tunicle are formed whitish concretions, resembling hard soap. But this disease arises not only from the viscosity of the bile, which causes it to stop in its passage, but also from its want of due consistence. For here the volatile salt, which is one of the compounding principles of the bile, is over-abundant, whence the bile becomes too thin and irritating to the intestines. In the former case, the body is too costive, and the dung is hard, and of a pale yellow, resembling something like clay. In the latter, there is a looseness attended with a fever, and the dung is generally yellow.

Now, if the horse be old, and the malady of a long standing, it is for the most part fatal; as it is likewise in case the side of the belly be hard and distended, and a difficulty occur in regard of turning short on the near side, together with a loss of flesh.

This distemper in the beginning easily admits of a cure; in order to which, let bleeding be directed in the first place according to the strength and age: then, if it be a proper season of the year, let recourse be had to a salt-marsh, which most commonly in a month's time puts an effectual period to the distemper. The virtue of salt-water I shall point out when I come to treat of surfeits.

Where a salt-marsh is out of the case, after bleeding, I would recommend the following ball, viz.

Take an ounce of turmeric in powder, an ounce of the juice of celandine, (or, if that cannot be had, two ounces of celandine in powder) half an ounce of castile soap, or hard soap, two drams of salt of wormwood, a dram of liquorice-powder, and with a suitable quantity of syrup of garlick, work these ingredients into a ball.

This ball, after bleeding as I just now hinted, is to be given once a day, or, in case the disorder be very inveterate, twice a day, morning and evening, for three or four days, and after that once a day, till a cure is effected.

Should

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Should there be a costiveness attending, an emollient clyster will be proper, and, after a turn of the distemper for the better, liver of antimony with sulphur and fenugreek-seeds may be given once a day in the corn for some time, made wet with chamber-lie.

This distemper in the beginning easily admits of a cure; in order to which, let bleeding be directed in the first place according to the strength and age; then, if it be a proper season of the year, let recourse be had to a laxative which will commonly in a month's time prove an effectual period to the distemper. The time of life, however, shall point out when I come to treat of the several distempers.

Where, I have said, out of the other side, bleeding, shall, viz.



Take a pound of powder, an ounce of oil of turpentine, for it that is to be used in the case of a distemper, let it be reduced to a powder, and mixed with a grain of hyacinth powder, and with a double quantity of syrup of garlic, work these ingredients into a ball.

Should I have now hinted, **C 6** **CHAP.** is to be given once a day, or in case the distemper be very obstinate, twice a day, morning and evening, for three or four days, and after that once a day, till a cure is effected.

CHAP. XIV.

Of the DISORDERS of the KIDNEYS, and
BLADDER.

THE signs, by which we may judge the kidneys to be disordered, are a weakness of the back and loins, a difficulty of staling, a loss of appetite, the urine being at the same time thick, and sometimes bloody, especially after a violent strain. A horse diseased in his kidneys can seldom be directed strait backwards, which is the case also when a horse is strained in the back, only with this difference, viz. in the latter circumstance, the urine is not so thick, but is higher-coloured. The first thing to be done in regard of either malady, is to take away blood, in order to prevent an inflammation, and that pretty plentifully, should a difficulty of staling be attended with a fever. In this case, to make a revulsion and relax the part, let a rowel be put under the belly, and a pint given twice a day, till the horse stales well, of the following mixture, viz.

Take marshmallows, the herb mercury, cinquefoil, and shepherd's-purse, of each two handfuls, and two ounces of madder in powder. Boil these in six quarts of water very slowly, till a third part is consumed. Then strain off the remainder, and add to each pint two ounces of honey, and an ounce of nitre.

When

When he stales well, and the fever is abated, I should advise half a pint to be given twice a day of the following preparation; viz.

Take two pounds of linseeds. Boil these in four quarts of water to the consumption of one quart, or more. Then take six ounces of Venice turpentine, and dissolve it in the yolks of four eggs. Then mix all together, and let the whole simmer over a slow fire for five or six minutes. Should it be judged proper to render this composition more astringent, an ounce or two may be added to it of armenian bole and dragon's-blood. This I have ever experienced to be of service in all weaknesses of the reins.

When the inflammation is removed, some practitioners recommend venice turpentine boiled in water till it becomes of a gluey consistence: which is then to be rolled into small balls of about the weight of an ounce, one of which is to be given every night and morning. As the boiling intirely destroys the heating quality of the turpentine, and leaves it very astringent, I cannot but approve of this conduct. Should the horse grow no better by the method prescribed, and the urine continue turbid, and be grown coffee-coloured or fetid, together with a loss of flesh, one may be assured of an inveterate ulcer in the kidneys, and that the disease is incurable.

A suppression of urine is sometimes consequent to an inflammation in the kidneys, and sometimes to a paralytic disorder, which renders them incapable

pable of separating the urine from the blood. In this case, the bladder is usually empty, so that there is no motion made to stale. Should things remain in this situation a few days, the body will swell to a great degree, and break out in blotches all over, while death is advancing in the mean time with redoubled strides, in order to close the unpromising scene.

Should the horse labour under an inflammation of the kidneys, let him be treated in the manner intimated above; and, in case he be collicive, let him have a common clyster. Should he not be collicive, I should recommend the following one: viz.

Take camomile flowers, aniseeds, and juniper-berries, of each an ounce, two handfuls of mallows, and an ounce of wild carrot-seeds. Boil these in five pints of water till half is consumed. Strain off the remainder, to which add an ounce of oil of turpentine, half a pound of common oil, a large handful of salt, and forty drops of the anodyne balsam. Should the complaint not give way to this method, let a poultice be applied made of garlick, horse-radish, mustard-seed, camphire, and soft soap, and let the reins be rubbed with oil of turpentine.

When the strangury does not arise from wind, or dung pressing on the neck of the bladder, it proceeds generally from a too long retention of the urine. Such horses make frequent motions to stale, stand stradling, with their bellies very full,

full, and their flanks distended. In this case bleeding is seldom necessary, the cure being commonly performed after this manner. In the first place, let his sheath be rubbed with an onion, and then a pint given him of the following decoction: viz.

Take marshmallows, and mercury, of each an equal quantity, two ounces of wild carrot-seeds, and some parsley-roots. Of these make a strong decoction, to each pint of which add oil of turpentine and nitre, of each an ounce, and four ounces of linseed-oil.

Where the pain is violent, thirty or forty drops of the anodyne balsam may be added to each dose.



CHAP.

of the urinary does not arise from the bladder, or from pressing on the neck of the bladder, or from a too long retention of the urine. Such horses make frequent motions to stale, stand standing, with their bellies very full.

CHAP. XV.

OF MOLTEN GREASE.

MOLTEN grease is when the fat of the horse is melted, and a great quantity of it falls into the intestines, together with a discharge of an oily substance with the dung. This disorder is most commonly fatal, and proceeds sometimes from violent exercise in hot weather, and often from a horse's standing too long in the stable at high feeding, without proper exercise. This malady is ever attended with a fever and restlessness, a starting and trembling, a great inward sickness, shortness of breath, and sometimes with the symptoms of a pleurisy: the dung is extremely greasy, with a scouring. The blood will have a thick skin of fat over it, when cold, of a yellow hue. The congealed part or sediment of it, is commonly a mixture of size and grease. A horse, thus affected, soon loses flesh, and, in case he survives, which there is very little reason for expecting, becomes hide-bound. His legs swell, which swelling continues till the blood and juices are corrected. And, if this be not done effectually, the farcy or some other disease will come on. In order to the relief of this distemper, in the first place, blood must be taken away plentifully, and the bleeding repeated for two or three days in a smaller or larger quantity, according to the urgency of the symptoms. Two or three rowels should also be put in immediately, and a cooling emollient clyster administered once

or twice a day, in order to abate the fever, and clear away the greasy matter from the intestines. Barley-meal, or oat-meal, in the water the horse drinks, will be at the same time proper, in order to soften it; and morning and evening let an ounce be given of cream of tartar, dissolved in a strong decoction of linseed and turnips, till the fever is off. After that, let recourse be had to a gentle purge or two of salts and lenitive electuary. When recovery seems to have advanced a few degrees, a dose of the diuretic balls directed in the greafe, will be adviseable, and after that, half an ounce of liver of antimony, with sulphur and foenugreek once a day in his corn for some time.



C H A P. XVI

Of SURFEITS and the HIDE-BOUND.

SURFEITS, as the eminent Dr. Bracken observes, proceed commonly from over-full feeding without sufficient exercise, or from feeding on bad provender. While the stomach is constantly receiving food, and as constantly transmitting new supplies of chyle or nutritive juice to the mass of blood, the blood-vessels on that account become distended, and full; insomuch, that what is over and above sufficient for a just nourishment, cannot be carried off by the proper outlets; that is to say, the canals or pores of the extremities are not wide enough to admit so much gross matter as is separated by the glands of the intestines; and, consequently, the distention of the vessels will be more and more increased, which must bring on several distempers, as the farcy, grease, staggers, and convulsive disorders.

All eruptions on the body proceed from a want of the free glandular discharges in consequence of obstructions. For when liquids urge their way faster upon the glands than they can be transmitted through the tubes of those glands, their coats are distended, and yield by degrees to the growing tumour, till the small vessels burst, and pus is formed. When a tumour is confined in a membrane, either a steatoma, a theroma, meliceris, or something of this kind is produced. A steatoma is a hard indolent encysted swelling, that contains a matter like suet of the
same

same colour throughout. A theroma is an encysted tumour that is a little soft, without redness, heat, or pain. It contains a whitish matter like paste. A meliceris is a round swelling void of pain, easily yielding to the fingers, and contains a yellow matter like honey in its proper bag. Now the removal of all obstructions of the glands is to be effected by attenuants and detergents. Hence, what can be of greater efficacy in this case than sea-water? I would therefore, on the appearance of any symptom in a horse of a surfeit, recommend a salt-marsh, for a month or more. The admirable effects of salt-water on animal bodies are fully displayed by the learned Dr. Russel, to whose treatise on that subject I refer the curious reader.

I shall set down one or two forms here of medicines, for the benefit of those who may not have it in their power to send their horses to salt-marshes. When therefore there is an appearance of any of those swellings on the body that are wont to arise on a surfeit, let blood be taken away in proportion to the strength and age of the horse. After that, let him have a gentle purge, and then be plied with the following decoction: viz.

Take the shavings of guaiacum-wood and sassafras, of each two pounds, a pound of horseradish, sharp pointed dock, dropwort, arsemart, water-cresses, ground-ivy, the lesser centaury, and five-fingered grass, of each four ounces, half a pound of liquorice-root, a pound of figs, and four handfuls of celandine.

dine. Boil all these ingredients in four gallons of forge-water very slowly, till two or three quarts are consumed. Then strain off the remainder, and keep it well stopped up for use.

A pint of this decoction is to be given every morning for a month: though, perhaps, it may be proper to omit now and then, in order to prevent its cloying. During the use of this, half an ounce of liver of antimony, sulphur, and scænegreek, is to be administered once day. External remedies on this occasion, especially repellants, are unnecessary. In case the pustules break, any common digestive will be sufficient; as, on a removal of the cause, nature will perform the rest independently of any foreign assistance. Should this method turn out intirely inefficacious, and there should be a loss of flesh, it is a certain sign of an inward ulcer, and that the disease is incurable.

CHAP. XVII.

Of the MANGE.

I LOOK upon it as an unnecessary task to exhibit the symptoms of this distemper, as they are obvious to every person of common penetration. Whatever Dr. Bracken, Mr. Gibson, and others, that have wrote on this subject, have asserted to the contrary, I will venture to affirm, that the mange does not proceed from a vitiated blood, but is intirely owing to small insects; to insects so small, as to be scarce discernible without the assistance of a microscope. Now, these insects deposite their eggs in the furrows of the cuticle, as in proper nests, where, by the warmth of the place, they are hatched in a short time: when the young ones, arrived at full growth, penetrate into the very cutis with their sharp heads, and gnaw and tear the fibres subjected to the part. Hence comes on an intolerable itching, which sets the horse a rubbing, whereby the part is torn, and emits a thin humour, which concretes into hard scabs. From these little animalcules constantly burrowing under the cuticle, and laying their eggs in different places, the disease is propagated. Whatever the ignorance or mercenarinefs of some people may suggest, purgatives here, and sweeteners of the blood, are altogether out of the question, the whole management, in regard of the cure, consisting in external applications, in order to destroy these corroding insects. For this purpose is recommended the following ointment: viz.

Take

Take stone-brimstone very finely powdered, black soap, tar, and train-oil, of each half a pound. Let the parts affected be well rubbed with this for two or three times, first observing to let all the scabs be carried off before its use; and after it seems well, to let the parts be washed with a strong decoction of tobacco-water.

I cannot help insinuating in this place, that sometimes the mange proceeds from a quite different cause, to wit, that of the horse's being very poorly kept. The cure, in this case, depends entirely on the amendment of the owner's conduct.



C H A P. XVIII.

Of the FARCY.

THE characteristic of the farcy is a cording of the veins, and an appearance of small lumps in several parts of the body. The farcy is a disease arising from plenitude, and a viscidty and lentor of the blood, and may very justly be ranked amongst glandular disorders. The cure consists in the use of attenuating medicines, and what at the same time will blunt those sharp corroding particles, which the matter has acquired by its stagnation. There is seldom any necessity for outward applications in regard of this disorder, as proper bleeding in the beginning, together with exercise, generally performs a cure. Should the corded veins not subside by this treatment, let them be well fomented with cow-piss and train-oil mixed together, and made very hot. And, in case the lumps should spread fast, in order to put a bar to their progress, a circle is to be made round them with a red-hot iron, and the pustules are to be dressed with oil of vitriol. After suitable bleeding, it will be requisite for three mornings running to give the following drink : viz.

Take groundsel and mugworth, of each two double handfuls, rue, wild valerian, pellitory of the wall, ground-pine, and vervain, of each two handfuls. Boil these in two gallons of forge water, to the consumption of two quarts.

quarts. Then strain off the remainder, and bottle it up for use.

A pint of this decoction is to be given at a time, to which may be added, to render it more palatable, two or three ounces of honey. It will not be amiss, in case it be a season for green celandine, to add likewise two ounces of the juice of that plant to each pint. If not, let two handfuls of the dry be boiled along with the other ingredients. I have frequently experienced the efficacy of this drink, preferably to all other remedies on this occasion. But should it, notwithstanding, fail, and the farcy be grown very inveterate, I would recommend the following treatment: viz.

Take celandine, dodder of thyme, and rue, of each a handful. Boil these in three pints of stale urine, till half is consumed. Then strain off the rest, and add to it lapis calaminaris, and tutty, of each half an ounce, cream of tartar, factitious cinnabar, and armenian bole, of each an ounce.

This must be taken fasting every other morning for three mornings, without feeding for four hours after. When the horse has been managed in this manner, let him have some liver of antimony mixed in his corn with sulphur. In some obstinate cases of the farcy, there will remain hard swellings on the joints; which to disperse, let them be bathed once a day with the following mixture: viz.

Take

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Take double distilled vinegar eight ounces, oil of turpentine three ounces, oil of vitriol two ounces, camphire half an ounce, dissolved in two ounces of spirits of wine, with bole armoniac one ounce.

As to what is commonly called water-farcy, this proceeds from a sluggish viscid blood, and is brought on by some of the same causes as a surfeit, and requires pretty much the same treatment. The best expedient to recur to in this case is seawater, or salt-marshes. When any swellings appear, the diuretic balls will be adviseable. Tumours will sometimes arise in several parts of the body. Should a tumour be soft, and yielding to the pressure of the finger, it will be proper to open it to let out the matter. The signs of an incurable farcy are, when it appears all over the body, the horse at the same time losing flesh, scouring much, looking dull, and forsaking his food.



C H A P. XIX.

Of the GREASE.

AS the grease in horses proceeds generally from inactivity, and too close a confinement to a stable, I shall descant a little in the beginning of this chapter on the benefit of exercise. By motion therefore and exercise all the parts, the ligaments especially and muscles, are cleared of excrementitious superfluities, the perspirable matter is fitted for exhalation, and the body rendered lighter, with at the same time an additional strength. For what makes running-horses so active and strong, but their daily exercise? What share of heels or strength have horses, kept in the house without a great deal of exercise, with those that are constantly running about loose in a forest? The latter would tire and outstrip those other, were those others in pursuit of them, almost beyond one's conception. And it is a matter past all dispute, that a horse kept out in the field, provided he has a place to run into, to guard against the inclemency of the weather, and is allowed his usual feeds, will do a greater day's work in hunting, than the finest steed confined to the stable in clothes; nor will he at the same time ever shew a greasy-heel, or swelled leg, or be liable to so many diseases.

Now were it customary to let horses range the field in the manner I have just now hinted, it would cut off a number of preposterous bleedings

ings and purges, the unavoidable source of much mischief.

As to the greafe, should this be derived from a want of exercise, by increasing that gently, and keeping the heels washed clean, and fomenting them with old verjuice, or hot vinegar, with the application of a bandage, the cure would not be long in being brought about.

The greafe sometimes proceeds from a relaxation of the vessels, and sometimes also from a vitiated blood. In the former case the cure depends upon much the same treatment, as when it is consequent to want of exercise: in the latter, recourse must be had to internal medicines, accompanied with proper evacuations. Should the greafe be an attendant on some other distemper, that disease must be first removed, before any remedy can take effect in regard of the greafe. If the heels crack, and a matter ooze out from them, apply for three or four times, as occasion may require, the following poultice: viz.

Take four ounces of garlick. Boil it in a quart of ale-grounds, and half a pint of vinegar, till half is consumed. Then add half a pound of honey, and three or four ounces of the ointment of marshmallows, or hog's-lard, or goose-grease, and with a sufficient quantity of rye-meal, work it into the consistence of a poultice.

This will soften and blunt the sharp, corrosive particles the matter has acquired, and at the same time, by promoting a discharge, will unload

the vessels, and take down the swelling. After the use of this poultice, apply some of the following linament : viz.

Take an ounce of Roman vitriol, and dissolve it in a pint of lime-water. When dissolved add to it half a pint of train-oil, two ounces of oil of turpentine, and half an ounce of verdigrease in fine powder. Mix, and make a linament.

Should this linament not be sufficiently drying, let use be made of the following ointment : viz.

Take red-lead, honey, and Venice turpentine, of each four ounces, an ounce of verdigrease in fine powder, and make them into an ointment.

Should the horse be full of flesh, a rowel or two will be proper after bleeding, and the following gentle purge : viz.

Take an ounce of aloes, a dram of jalap, two drams of crocus metallorum, an ounce of cream of tartar, and thirty or forty drops of oil of aniseeds. Let these be made into a ball, with syrup of buckthorn.

After this purge, two or three doses of the diuretic balls would be adviseable, as they would thin the blood and humours, and break through the minutest obstructions. I cannot omit here a caution,

caution, which ought ever to be observed, against giving strong resinous purges, which frequently bring on an inflammation, and afterwards a mortification.

It would be of great relief to a horse affected with the grease to let him run out in a paddock, But, if no such convenience is to be had, a large wide stall would still be of some service: though, in reality, a salt-marsh would be the most beneficial expedient in this case.

As to scratches, crown-scabs, and rat-tails, these are concomitants of the grease, and require the same manner of treatment: only, when the excrescences are hard and obstinate, recourse must be had to the knife and strong caustics. The following mixture I have known attended with very good success: viz.

Take an ounce of Roman vitriol, and dissolve it in a pint of strong lime-water. Then add two ounces of oil of turpentine, and an ounce of oil of vitriol. The oil of vitriol is to be put in very gently, otherwise it will make the bottle fly.

This caustic will destroy the carious quality the matter has contracted from its long lodgment, and brace up the relaxed parts. Should the grease or swelled legs proceed from a state of poverty, the blood being languid, and the muscular force not strong to push on the fluids, in that case all evacuations are hurtful, and all the resource one can have is to mend the feed, and to

let the exercise be gentle. The legs will sometimes swell after a hard journey, which a little rest and moderate exercise seldom fail to remedy. Now on this, and, indeed, on all other occasions, an eye is to be had to nature, and her operations, which are always to be consulted, and to be interrupted upon no account whatever.



CHAP. XX.

The DIURETIC BALLS for the GREASE.

TAKE salt prunell and nitre, of each four ounces, half a pound of stone-brimstone finely powdered, two ounces of cinnabar of antimony, or crocus metallorum, a pound of castile or hard soap, and an ounce of balsam of sulphur, yellow rosin six ounces, oil of juniper one ounce, salt of tartar one ounce. Let these be made into a paste, and the quantity of a small hen's-egg of it, formed into two balls; be given in a morning on an empty stomach, the horse fasting for two hours after. Then let him be walked out for the space of a couple of hours, and, when he is out, let him be watered a little at a time, and often. After this, liver of antimony, given him for some time, will attenuate the blood and humours, and render them fit for passing through their respective ducts.

C H A P. XXI.

Of venomous BITES from VIPERS, and
MAD DOGS.

AS to what regards the action of poisons on an animal body, I shall refer the curious reader to a celebrated piece of the late learned Dr. Mead, on the subject of poisons. The first intention in respect of the cure of poisonous bites, is to prevent the venom from mixing with the blood: which may be brought about, in case the affected part will admit of being immediately cut out with a knife, and cupping-glasses are applied to empty the vessels, and the wound afterwards cauterized with a hot iron. A good bathing of the surrounding parts with sweet-oil would afterwards be very proper, and a poultice to the following effect: viz.

Take rue and rag-weed, of each two handfuls.
Boil these in a quart of strong lie to a pint.
Thicken the liquor with cow-dung to the
consistence of a poultice, and then apply
it.

After this, let the wound be kept open with a piece of sponge for a month at least, and dressed with the tobacco ointment.

I shall here exhibit a case that happened under my care at Stradgill-hall, near Clare-market in Suffolk. A tanner's horse was bit by a viper a little above his hind-hoof. A swelling immediately

ly seized his leg and hock, so that in a few hours the leg was become as thick as three legs. On being sent for to him, I found him very sick, with a slow fever upon him. I would not bleed him, for fear of drawing the poison more into the body, but immediately made a strong fomentation of rue, wormwood, rag-weed, and wood-ashes. After I had fomented for some time, I rubbed in a large quantity of sweet-oil and some vipers-fat mixed with it. I continued to foment the part three times a day, and enlarged the orifice, which was so small as to be scarce perceptible. I kept it open for a month, and gave the horse two drinks a day, made of rue and scordium boiled in water. To each pint of this decoction, being the quantity allotted him at once, I added a dram of salt of hartshorn, an ounce of Venice treacle, half an ounce of cinnabar of antimony, and three ounces of sweet-oil. This was exhibited four times. The symptoms now abated, the appetite returned, and the swelling of the leg was reduced. But as it did not diminish so fast as I could have wished, I had recourse to a dose of my diuretic balls; and the horse intirely recovered, and came into better order than he had been in for several years.

As for internal medicines under the bite of a mad dog, preferably to all others I take upon me to recommend the following, having abundantly experienced its efficacy: viz.

Take two double handfuls of rue; Venice-treacle, garlick, and tin scraped; of each four ounces. Boil these in two quarts of ale

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over a gentle fire close stopped up till half is consumed. Then strain off the liquor. and keep it close stopped up for use.

Half a pint of this is to be given to the horse every morning fasting, and the dregs are to be applied to the wound daily by way of poultice. Previously to its administration, it will be proper to take away two or three quarts of blood, more or less, according to the strength and age. Swimming the horse in the sea; or, if that be impracticable, in a pond, or river, two or three times a week, would be likewise of service to him on this occasion. Dr. Mead, in this distemper, advises half an ounce of ash-coloured ground-liverwort, and a quarter of an ounce of pepper, to be given every day for twenty days.



C H A P. XXII.

Of a DROPSY.

I Shall first speak of those external dropscall swellings that sometimes are formed under the horse's belly. These arise from a viscosity and lentor of the blood, and are apt at the same time to affect the legs; whereby its circulation thro' the glands is obstructed, and the lymph forced out of the proper vessels destined to retain it, from whence is caused this preternatural lodgment of watery humours. This disorder is very easily distinguished from any other swellings, by the flatulency and softness of the parts affected, which, if pressed hard with the finger, will pit. The cure of it consists either in scarifying or putting in hair-rowels, together with doses of the diuretic balls, and liver of antimony, sulphur, and stenugreek-seeds, given for some time once a day in the corn.

Another kind of dropfy is, when the water that is at first confined to the thorax, on increasing to a quantity too large to be confined in that cavity, forces its way into the lower belly. This species is generally incurable, it being observable upon dissection, that the lungs in this case are destroyed, and bear a resemblance to lights boiled all to pieces. This wasting of the lungs is probably derived from the heat of sharp fumes, arising from the specified water. This disease is chiefly attendant on horses that have stood long in the stable without exercise, which is so requi-

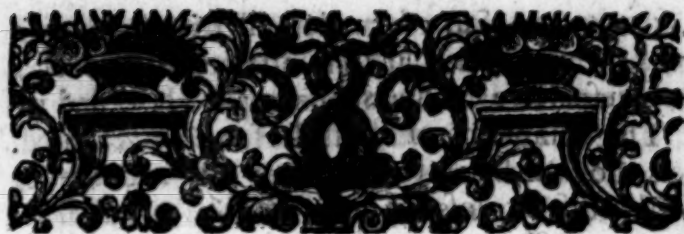
84 A NEW TREATISE, &c.

site for keeping up the muscular force employed in propelling the blood and lymph forwards in their respective channels.

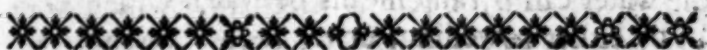
The symptoms of this distemper are a heaviness and dullness, attended with a slow fever, and weak pulse, a loss of appetite, an inability to work, a costiveness commonly in the body, and a very defective staling. Under these circumstances a horse seldom survives above a month or six weeks, and very often not above a fortnight. If the water can by any means be evacuated, it must be by either rowelling, or tapping.



CHAP.



PART THE SECOND.



CHAP. I.

OF STRAINS IN VARIOUS PARTS.

ALL Strains in whatsoever part are a relaxation of the muscles, and proceed either from slips or blows, or from over-hard riding. The cure consists in the application of such things as will cool the part, brace up the relaxed vessels, and dissolve whatever coagulation of the blood and juices may happen to be attendant on the malady. In order to this, in the first place, the part affected must be well fomented with hot vinegar or verjuice, or the lees of wine: after which, should the disorder be in the leg, or the pastern, or coffin-joint, recourse must be had to the following poultice, viz.

Take a quart of the best old verjuice, or vinegar. Put in it an ounce of salt-petre, and
two

two handfuls of currier's shavings, and boil them till they acquire the consistence of a poultice, which must be applied hot, and renewed twice a day till the swelling is abated. Let the bandage be broad list; and the leg bound up a good way with it, as bandages in all strains are of eminent service. After an abatement of the swelling, a cold charge is to be laid on of Armenian bole, vinegar, and the whites of eggs. In all strains a good deal of rest is necessary, which will sometimes alone effect a cure. Should the above poultice be not of efficacy sufficient to remove the coagulated matter lodged on the part, the ointment must be made use of I have directed for the shoulder, which I have experienced of great efficacy on these occasions.

Should the strain be very violent, and the horse in danger of becoming incurable, it will be requisite to fire him, and apply a blister; and after that to turn him out to grass for six months. Should the lameness be in the coffin-joint, it will be proper to let the foot be stopped up with soft soap, tar, and hog's-dung with a little deer's suet in it, the inside of the foot being first pared thin in order to give the medicine the greater liberty of acting. When the lameness is in the shoulder, after bleeding, let use be made of some of the following ointment, viz.

Take oil of turpentine, linseed-oil, and oil of camomile, of each two ounces, five ounces of

of nerve-ointment, ointment of marsh-mallows and deer's suet, of each two ounces, oil of St. John's-wort and oil of thyme of each an ounce. Melt these all well together, and when almost cold add to them an ounce of sublimate in fine powder.

A portion of this ointment is to be rubbed in well upon the part affected with the hand covered with a bladder: and, to make it penetrate the better, it may be assisted with a hot iron. Along with proper rest it will be of singular efficacy. When the strain is to a great degree, or any swelling attending the shoulder, it will be ever advisable to put a rowel in under the breast. Strains in the stifle or wherl-bone are to be treated with this ointment in the same manner; with this difference only, that, when the strain in the wherl-bone is violent, we are obliged to fire very deep. I shall here exhibit the form of a blistering ointment, that I have always found to answer my purpose better than any other, which is as follows, viz.

Take an ounce of train-oil, three ounces of nerve-ointment, fresh butter and tar, of each two ounces, an ounce and a half of Spanish flies powdered, and half an ounce of euphorbium. Make these with some bees-wax into an ointment. Where any hard excrescence wants to be dissolved, an ounce of sublimate is to be added to it.

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The following charge, as it is of known benefit on occasions where there is a demand for such remedies, I shall also make public, viz.

Take galbanum, mastich, and tacamahae, of each an ounce, four ounces of Burgundy-pitch, and half an ounce of tar. Make these into a plaster.

I shall now set down two mixtures, of service in dispersing any swelling occasioned by blows, when restringents have failed. The first consists of half a pound of hard soap, and an equal weight of salt-petre, boiled in five quarts of water to the consumption of one quart.

The part is to be well fomented with this made hot twice a day. A bandage in the mean while, as was hinted before, will be of assistance.

The other mixture is composed of equal quantities of venice turpentine, soft-soap, and hog's-lard, melted thoroughly together, and to be used, by way of fomentation, hot.

Should the swelling be large and attended with a great heat, bleeding would be adviseable, and a dose or two of the diuretic balls directed for the grease, which I have always found of the greatest benefit, in this case, of any internal medicines. Should the swelling not disperse by this manner of treatment, the best expedient will be to open it, and take out the grumous matter, and after that to dress the part with the tobacco ointment. Fomentations, made of wormwood, camomile-flowers, and elder-flowers, of each a handful or two, are sometimes very properly used, in order
either

either to disperse a swelling, or to help to bring it to a suppuration. It is also sometimes of service, when the swelling is large, to put in a rowel, by that means to promote a discharge of the collected matter.



CHAP. II.

Of WIND-GALLS.

THESE are obvious to every one, and of course want no description. As to their treatment, in the first place it will be necessary to make use of restringents, as were directed for strains. But, should these turn out inefficacious, they must be opened, to let out the glutenous matter, and drest with the following mixture, viz.

Take an equal quantity of pitch, resin, tar, and bees-wax melted well together.

Let this be applied warm, and the part covered with flax. Should it not succeed, firing and a strong charge will effect a cure.



C H A P. III.

Of BLOOD-SPAVINS, and BOG-SPAVINS.

A Blood-spavin is nothing but a dilatation of the vein, and the method generally made use of for curing it, is by tying the vein up above and below, and by blistering. A bog-spavin is a fullness of the hollow part of the hock, and proceeds from strains and hard-riding in the same manner as wind-galls do. The relief of them depends on an opening made in them to let out the coagulated matter, and after that, firing, and the application of the above-specified strong charge. But to be sure there is not one in a hundred cured; as for a blood-spavin I never saw one.

As to mallenders and fallenders, these are creeks in the bend of the knee that discharge a sharp indigested matter, which is frequently the cause of lameness. They are cured by washing them thoroughly with chamber-lie, and an application of some of the ointment recommended in the appendix for the joint-oil; or with a mercurial ointment, made with soft soap instead of grease; which is a certain cure without any internal medicine; for they are entirely brought on by neglect of proper cleaning.

CHAP. IV.

Of SPLENT'S, CURBS, BONE-SPAVINS,
and RING-BONES.

IN regard of splents, I should not advise any thing to be done to them unless they occasion a lameness. In that case, let the hair be clipt off, and, after beating them with a blood-stick, let some of the mixture be rubbed in well, mentioned in the appendix for splents.

Bone-spavins and ring-bones require firing and blistering immediately, as no astringents in nature can here be of the least service. Nor should I advise any of the strong caustics, which are too often used, as they must injure the joint and the parts contiguous to it, and render the horse lamer than he was before, which I have been too much an eye-witness of. Curbs are remedied by the same method of treatment as splents. But should not that succeed, recourse must be had to firing.

CHAP. V.

Concerning an INFLAMMATION.

INflamations and Mortifications have been very little spoken of by any author, which is a point that much surpriseth me, as so many horses die of mortifications, which must proceed from an inflammation. I should have expatiated more on this head in my former edition of this Treatise, and communicated some farther observations in respect of diseases incident to horses, had I not been under a necessity from my station in life to attend other business. However, this task I shall now perform with pleasure, and offer to the public without any reserve whatever has occurred to me worthy notice, which I flatter myself will be somewhat interesting, as what I shall deliver will be the result of no small experience and practice.

First then, an inflammation arises from an obstruction of the circulating fluids in some part of the animal or other. Now, the several parts of the body are furnished with vessels which either convey the blood from the heart to the extremities of the body, or bring it back from the extremities to the heart, after the offices have been performed of nutrition and secretion.

These vessels are divided into arteries and veins. The arteries are of two kinds: first, those which are called sanguinary arteries arising from the heart by the aorta, which afterwards subdividing into innumerable branches, distribute the arterial

terial blood to the several parts. Secondly the lymphatic arteries, which take their rise from the former at different distances, and convey to the parts a limpid fluid, separated from the arterial blood.

The vessels that re-convey these fluids are likewise of two kinds, viz. the sanguinary veins, which return the greatest part of that blood which the sanguinary arteries conveyed to the extremities, and the lymphatic veins, which re-convey the remaining lymph brought thither by the lymphatic arteries.

As the good state of these fluids is necessary for the attainment of health and preservation of life, so the due distribution of them and the just structure of the vessels wherein they circulate are equally requisite; and either to a division or an obstruction of these vessels most outward tumours and ulcers are owing.

In case the fluids are too violently propelled into any of the capillaries, it is possible that some of the floating particles, being too large for the diameters of those vessels, may stop and cause an obstruction: and, unless there are some collateral tubes capable of conveying them on in the course of the circulation, they must necessarily be more strongly fixed, and the obstruction thereby become more confirmed.

It is this obstruction which we consider as the cause of an inflammation in whatever vessel it happens to be formed, whether of the blood or lymph. From this time the tumour commences, though it may not be apparent: but in proportion as the obstruction extends to the neighbouring

ing parts the tumour increases. I shall not in this place make any distinction between these tumours, whether they are phlegmonous or of the nature of an erysipelas, that being of little use. For let the obstruction be either of the lymph or the blood, should it occasion a tumour or an inflammation, it will affect both the one and the other.

Whatever is capable of giving an increased velocity to the blood, or can thicken or coagulate it, may produce these obstructions, whether by introducing into it any heterogeneous matter, as ill digested aliments or any poisonous substance, or by incrassating the fluids by over-hard exercise, and sweating the horse too much. They may likewise proceed from a diabetes, as also from external irritating causes, such as punctures, excoriations, or incisions, and from any long compression of too tight bandages, and from violent contusions or extensions, which destroy the elasticity of the vessels, so essentially necessary in regard of the progressive motion of the blood.

From an obstruction proceeds a stagnation: or, in other words, the fluids intirely lose their progressive motion, first in some of the tumified vessels, and afterwards in others where they circulated but slowly. These stoppages, and the alterations they unavoidably occasion in the blood and juices, happen sooner or later, according to the degree of the velocity of those fluids, or their disposition to fermentation.

From whatever cause these disorders arise, they always terminate either by a resolution of the obstructed fluid, a suppuration of the indurated tumour, or a gangrene. Resolution is a motion
produced

produced in the obstructed fluids, which causes part to transpire through the pores, and the rest to enter again into the course of the circulation.

Now in order to resolve this obstructing matter, two intentions are to be had in view. The first is to abate the nifus of the solids, and to lessen the weight and quantity of the blood; inasmuch as these tend rather to increase the inflammation than remove it. On this occasion therefore bleeding will be necessary, and a cooling gentle purge of the following nature, *viz.*

Take cream of tartar and Epsom salts, of each an ounce, or more. Mix these with three or four ounces of sweet oil.

This purge it will be adviseable to repeat, and on the days it is not administred, to give an ounce of nitre twice a day dissolved in a pint of water, the body at the same time being kept open with mashes. This method will retard the impetuous motion of the blood, allay its effervescence, and conduce to its fluidity and attenuation.

Should the tumour not be formed in the great cavities, but situated within the reach of external remedies, nature is to be assisted by the application of emollient poultices and fomentations, such as a decoction of mallows or chickweed made with vinegar or verjuice with a little spirit of wine added to it. The poultices may be made of cows-dung and vinegar, which will relax the fibres of the obstructed vessels, and thereby prevent their laceration. Resolvents likewise will be necessary, in order to attenuate the coagulated fluids before

before they come putrid, causing part of them to transpire through the pores, and the remainder to pursue their course in the circulation. Nothing will answer this purpose better than soft soap and brandy boiled together, or opodeldoc.

As soon as resolvents take effect, the tumour diminishes, and the pain and fever abate. But, notwithstanding these endeavours, should the inflammation still increase, it will terminate either in a suppuration, a schirrus, or a gangrene, according to the disposition of the stagnated fluids. If these inflammations are external, suppurations should be promoted to prevent their terminating in a schirrus, or gangrene, both which are to be avoided as much as possible.

I cannot help taking notice in this place of the strange stupidity of some practitioners in farriery, with whom it is customary to apply hot sharp irritating medicines to inflamed tumours, which must unavoidably augment the inflammation, and, instead of preventing a mortification, the sooner bring one on. It would certainly be abundantly more eligible in these cases to leave the whole affair to simple nature, than to recur to such a strangely preposterous conduct for a cure.

The congealed fluids are not always disposed either to be resolved, or changed by fermentation into pus; but will sometimes, notwithstanding the application of the most efficacious topics, be so inspissated in the vessels, that the tumour remains hard and almost without any sensation. This is the case chiefly in regard of the glandular parts agreeable to the nature of their fluids.

In order to prevent a circumstance of this kind, such things are to be given inwardly that are endued with a property of thinning the blood, and emollient fomentations to be constantly applied outwardly, and poultices of a moderate warmth. Ointments and plasters are to be avoided, and whatever is of a hot tendency, which serve only to thicken these fluids, that are not of a nature to admit of fermentation.

Though the tumour thus terminating does not seem at present to prejudice the part affected, yet in time it may produce ill consequences by its pressure upon the neighbouring vessels, and thereby impeding the free course of the circulation. On such an occasion I should advise a caustic to be applied to the part, or, if it be more convenient, the skin to be laid open, and the tumour, if not too large, to be cut out with a sharp knife, and dressed with some warm digestives, while fomentations are made use of to soften the lips of the wound, and to dispose them to digest.

When a tumour is to be dispersed that is not critical, but what arises from a viscid state of the blood, or from blows or bruises, in case there should not too great a fever attend it, a dose or two of the diuretic balls (two of which, each as big as a small hen's-egg, make a dose) would contribute as much as possible to the removal of the obstruction. And sometimes it will be necessary to put in a rowel near the tumour, by way of making a revulsion of the matter settled from the part affected.

CHAP. VI.

Concerning the Termination of a Tumour by Suppuration.

IT seldom happens that the coagulated fluids remain entirely inactive, being often put in motion by a kind of fermentation, which sets them a-float. By this means their bulk is increased, and the vessels, being very much distended, become thin, break, are attenuated, as it were by attrition, and mixed with the putrefying fluids, so that all together they are formed into a substance we call pus.

When the tumour is thus disposed to suppuration, the formation of matter is to be promoted by applications that will soften the teguments, advance the fermentation and maturation of the stagnating fluids, and confine the heat and perspiration; such as ointment of marsh-mallows and geese-grease, mixed with lilly-roots, into a cataplasim, and applied warm.

In those abscesses, which come to maturation, the horse will be attended with a small fever. Bleeding, in this case, except the fever rise to a high pitch, and the vessels be greatly distended, is not, in my opinion, adviseable. Where, indeed, a raging fever prevails, together with an over-fulness of the vessels, bleeding will sometimes forward the maturation: but the fermentation cannot be carried on without a proportionable warmth or heat.

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When the course of the fermenting fluids is retarded, it is almost impossible but some part of them must be separated and return into the circulation, which will produce a fever that will increase, till the maturation is compleated. When the matter is formed, we find the bulk of the tumour apparently augmented, and, by pressing with the finger on each side of the tumour, one may feel a fluctuation of the matter.

The proper time for opening abscesses or imposthumes in general is when the pus is formed, and discoverable by the fluctuation of it: though in critical abscesses, which sometimes terminate malignant fevers, the tumour should be opened before the maturation is compleated; but, in regard of others, they are not to be opened, they are on the point of opening of themselves.

The manner of opening abscesses is either by a caustic, or an incision; except in respect of those abscesses, where the matter is near the surface, in which case the best expedient is a knife. But when the matter lies deep, a caustic is advisable, especially in critical abscesses which terminate malignant fevers. For as the matter, that is deposited either in the glands or elsewhere, may be carried away by the violence of the fever and repass into the blood, it is necessary to open these tumours before the maturation is compleated, as the opening them by a caustic will answer the purpose much better, than by performing the operation by a knife, as the parts are thereby destroyed that are impregnated with the malignant humour. The whole eschar is to be scarified,

fied, and small orifices are to be made where the matter began to form, by which means the humour will be prevented from returning into the circulation. After this is done, it will be requisite to apply digestives to clear the part of the eschar, and to bring the wound to suppuration; to answer which intention nothing is of greater efficacy than Arcæus's liniment, which I have experienced on a multiplicity of occasions. As every one may not be furnished with a proper dispensatory, I shall here set down its composition agreably to the terms of its author, viz.

Take a pound of hogs-lard, two pounds of goats-sewet, or, in lieu of it where that cannot be had, deers or mutton sewet, gum elemi and venice turpentine, of each a pound and a half. Melt these together: then strain off the whole, and make an ointment according to art.

In order to open a tumour by a caustic, it will be requisite to clip or shave away the hair, and to cover it with a very adhesive plaster with a hole cut in the middle of it, of such a form and size as will intirely correspond with the figure and dimensions of the intended aperture in the tumour. To this must be applied the caustic, which before its application is to be moistened in order to render it more effectual, as the salts of the solid caustic will not act till they are in a state of dissolution. Then the whole must be covered with another plaster; and, where the part will admit of them, recourse must be had

to compresses and bandages, which will confine the tumour better, and help to keep on the caustic.

The caustic I have found by experience best to answer one's purpose on this occasion is butter of antimony, producing its effect much sooner than lapis infernalis, and making the eschar separate with all imaginable expedition. I shall not point out the method of making it, as it is an elaborate composition, and at the same time to be purchased at a very easy expence: so that it would be no ways worth the practitioner's while to set about the preparing it himself. It is to remain on the part three or four hours.

One thing I must not forget to recommend to the operator in these cases, which is not to be sparing of his knife when he opens a tumour, but to open it the whole length, and constantly to give it a depending orifice if possible for the matter to run off by. In regard of ulcers likewise, these are to be opened at the top wider than at the bottom, as we can never gain ground, while any of the sharp matter is confined. Care at the same time is always to be taken to direct the knife lengthways with the muscles. And in whatever manner an abscess is opened, we ought at the first dressing to fill up the cavity where the matter was lodged with soft lint, that it may not create pain by pressing the lips of the wound.

C H A P. VII.

Concerning a MORTIFICATION.

AN inflammation sometimes terminates in a mortification: which proceeds from a confirmed obstruction in the vessels and a putrefaction of the stagnated juices, whence the parts are essentially deprived of all manner of nutrition. This putrefaction, from its being communicated to the circulating mass, in case it be not immediately remedied, prognosticates certain death.

The general symptoms of a tumour turning to a mortification in a horse are first a coldness of the tumour, a pitting in of your fingers when you touch it, a dullness and sickness attended with cold sweats, the last of which symptoms seldom admits of a cure.

I have seen a great many horses attended with tumours under the belly, which turned to a mortification before any assistance had been applied for. These in spite of all remedies turned out fatal. This kind of tumours, which for the most part seizes all old horses, generally proceeds from an impoverishment of the fluids that renders them incapable of invigorating the parts where the tumour is formed, from whence of course a gangrene naturally follows. The cure of this malady depends on deep scarifications, and dressings with the mixture which will be recommended by and by in these cases, together with the ball hereafter mentioned every six hours.

A mortification will sometimes proceed from a defect of the animal spirits, and often from a horse's catching cold in nicking, whence is formed an obstruction, and likewise an inflammation affecting the spinal marrow, accompanied with a paralytic disorder of the vessels, which is not to be wondered at. For as the vessels, receive their elasticity from the spirits, that enables them to resist the influx of the fluids ever endued with a tendency to dilate them, and also gives them that oscillatory motion, which assists them in carrying on the course of the circulation; in case the animal spirits are no longer conveyed to them by the nerves, the fluids circulate at first more slowly, then insensibly cease to flow at all, and the vessels become obstructed. These parts likewise grow emaciated, flaccid, and sometimes intirely insensible, when the least pressure upon them will occasion a mortification.

Now, except proper relief can be given to the spinal marrow, it will be impossible to stop the gangrene. This must be brought about by the internal medicines, in which class the following ball, from the frequent experience I have had of its virtue, stands in my opinion the foremost, viz.

Take an ounce and a half of jesuits-bark, an ounce of valerian-root, a dram of camphire, and half a dram of saffron. With some honey and a litle flour, make these ingredients into a ball, to be given every six hours, and washed down with a strong decoction of scordium.

As

As to external applications, I think I have given sufficient hints to avoid in regard of them whatever may heat or irritate the parts, and have advised recourse to be had on the occasion to coolers and emollients assisted by things of a moderate warmth. When therefore the excessive tension and heat of a part lay a foundation for dreading a gangrene, we must by scarifications procure a discharge of the matter lodged in the lips of the wound and adjacent parts, and, in order to diminish the too violent fermentation and rarefaction of the blood, we must apply the emollient and gentle resolvent poultices and fomentations spoken of above.

But, should an approaching mortification be indicated by the paleness of the wound, and livid spots and coldness of the part, I would by all means advise the following poultice, viz.

Take four or five pounds of cows-dung, a pound of foot, and, with a sufficient quantity of stale urine and brandy, make a poultice.

This is to be laid on hot, and just before it is applied, mix with it two or three ounces of oil of turpentine. But it must be remembred, that this poultice, however serviceable it may be in this state of an inflammation, is by no means proper in the first stage of one, as it would augment the heat and pain, and, instead of preventing the gangrene, which might have been done by milder applications, it would infallibly speedily bring it on.

Now, when the mortifying wound comes to be very livid, together with a loss of sensation in the part, and a coldness with a thin sharp fetid ichor, which are the general symptoms of a gangrene, we must immediately make scarifications in the live parts to give liberty to the stagnated juices, and cut away all the mortified flesh with a knife, or destroy it by means of butter of antimony: or, should this prove ineffectual, recourse must be had to the actual cautery. The following ointment I have found of great benefit on these occasions, viz.

Take four ounces of Ægyptian honey, burnt alum and oil of vitriol, of each an ounce. Mix these together into an ointment, and apply it hot to the place affected with tents.

After this the part is to be plied five or six times a day with the subsequent fomentation, viz.

Take a quarter of a peck of wood-ashes, rosemary, bay-leaves, wormwood, of each two handfuls. Boil these in three gallons of urine in order to make a strong decoction.

When the wound is brought to a good digestion, it is to be dressed with common digestives, such as Arcæus's liniment, with a little oil of turpentine in it, and at the same time the ball is to be given, as it is also through every stage of the distemper. I don't know any thing of greater

greater efficacy than the bark in order to bring a wound to a good and laudable digestion: from the use of which drug I have seen the most surprising effects, given to the quantity of an ounce or two ounces at a time in a decoction of valerian-root twice a day.

As often as I reflect on the bark, I am perfectly charmed. The powers it is endued with, of relieving malignant disorders incident to the human body, put me on recurring to its sovereign virtues in regard of the like distempers befalling horses. Dr. Mead has absolutely immortalized himself by the use he made of it in his practice. I shall beg leave on this occasion to quote a paragraph in the Letter from a physician at Bath to Dr. Heberden of the college of physicians in London relating to this affair. His words are these.

“What the late Dr. Mead hath delivered, in his treatise of the small-pox, concerning the use of the bark in a malignant species of that distemper justly stiled the bloody kind, deserves all imaginable regard and attention: and were there no other merit in that elaborate work of his, yet his recommendation of that noble product of Peru in the manner there displayed, is sufficient of itself to endear him to posterity, and to make his memory revered by the whole class of practitioners in all future ages.”

C H A P. VIII.

Concerning WOUNDS and FRACTURES.

IN regard to wounds or contusions made by fire-arms, or any instrument, we must carefully cut off those parts which are bruised, and as it were burnt in the lips of the wound, and endeavour to render such wounds similar to those made by incision, by removing all the mortified flesh, and bringing it to a good digestion. Should any difficulty arise on this occasion, recourse is to be had to the bark just spoken of.

Should a wound be accompanied with a fracture, we must examine with great care whether the fracture be in two or more pieces, and where it is precisely seated. Then we are gently and with great precaution to extract all the splinters that are loose and disengaged, leaving those which adhere too strongly either to the flesh or periosteum to remain, till the subsequent suppuration disengages them. It is also expedient to examine whether it is more advantageous to extract the splinters by the wound itself, and also through it to convey remedies to the fractured bone; or whether it would not be more proper to make near the fracture a fresh aperture, in order to facilitate both the extraction of the splinters, and the application of medicines either to the denudated bone, the periosteum, or the flesh.

flesh. Whatever may be thought most necessary, we must immediately make a long and large incision in order to discover the fractured bone.

As for wounds complicated with a fracture of the bone, they are to be treated like other wounds, unless the bones are laid bare; in which case they require a different treatment, particular care being taken that the pus and sanies, impregnated with acrid and corrosive salts, do not affect the bones, and render them carious. And, as bones deprived of their periosteum rarely unite with the flesh before they exfoliate, that is, before their external lamina, which has been exposed to the influence of the air, falls off by way of scales, which seldoms happen sooner than three weeks or a month, and sometimes longer, so we ought to keep their surfaces as dry as possible. For this reason we must avoid all greasy and oleous remedies, which are capable of softening and relaxing the texture of the bones, and consequently would prevent their exfoliation.

Bones are therefore to be dressed with simple spirituous liquors, or with the antiseptic powders, such as myrrh, aloes, gentian, and euphorbium, with which the pledgets may be sprinkled, that are laid over the bones. I generally dip them in tincture of myrrh and aloes, and lay a great many of them one over the other, in order to absorb the pus or sanies, which being discharged from the suppurating flesh would greatly injure it. We must also take care to prevent the generation of fungous flesh, which would prove an obstacle to the commodious dressing

dressing of the bone. Neither must we think of cicatrizing the wound till the exfoliation is intirely terminated, and the surface of the bone is covered with florid granulations of flesh.

I must in this place particularly advise the practitioner to keep a guarded eye against the coming on of a gangrene, which may happen on the slightest occasion. Should there appear the least signs of one, it must be treated in the manner directed above.

In regard to dislocations, these seldom or never happen to horses as they do in respect of men, which is owing to their different make. As to strains, I refer the reader to the first chapter of this second part, page 85. A shoulder-slip is an incident common enough to horses, and therefore I shall here communicate an expedient for the relief of it, which I have found to succeed on many occasions.

It has been customary for a long time past to swim a horse on his laming himself in the shoulder, the benefit expected from the swimming being on its making him move both shoulders alike in order to bring the lame one into its proper place. But, where swimming is not practicable, it will answer the same purpose to proceed in the following manner. The moment you find your horse has hurt his shoulder, get off, and with a cord or strap tye his fore-legs almost close together; then go behind him, and with your whip make him jump forward for some paces. After this untie his legs, mount him, and pursue your journey gently. As soon as
you

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you come in, take a little blood away, and dress the shoulder once with some of the ointment directed in page 86, 87. or with some spirit of wine and camphire, and a little oil of turpentine ; which method will generally perform a cure without any further assistance.



CEAR.

C H A P. IX.

Of Wounds.

IN regard of the management necessary for wounds, I thought I could not do better than follow the method recommended by that judicious practitioner in surgery, Mr. Bartlet: who very justly observes, that the difficulty of healing some kinds of sores arises frequently from the unskilful manner of dressing them. It may be necessary then to observe here once for all, that the cures of most sores are effected by the simplest methods; and that it is often of much more consequence to know how to dress a sore, than what to dress it with; and in this consists the chief art of this branch of surgery. For the most eminent in that profession have long since discovered, that variety of ointments are unnecessary in the cure of most wounds and sores, and have discarded the greatest part formerly in repute for that purpose; repeated observations having taught them, that, after the digestion, nature is generally disposed to heal up the wound fast enough herself; and that the surgeon's chief care is to prevent a luxuriancy of proud flesh, which all ointments, wherein oil or lard enters, are but too prone to encourage, as they keep the fibres too lax and supple, and which dry lint alone early applied as easily prevents by its absorbing quality, and light compression on the sprouting fibres. Thus, if a hollow wound, or sore, is crammed with tents, or the dressings are applied too hard, the tender
shoots

shoots of flesh from the bottom are prevented from pushing up, and the sides of the sore in time from this distension may grow horny and turn fistulous. Nor has the matter by this method a free discharge. On the other hand, if sores of any depth are dressed superficially, the external parts being more disposed to heal and come together than the internal, they will fall into contact, or heal, too soon: and the sore not filling up properly from the bottom will break out afresh. Now, except this due medium is observed or obtained in the dressing, no hollow sore can heal up properly.

When the body is in a sound state of health, very simple methods will effect a cure; and, when otherwise, the most pompous medicines will not avail, till the blood is rectified by proper internal remedies, specified in the treatment of surfeits, and the grease. The same conduct is to be observed in regard of the poll-evil and fistulas.

In all fresh wounds, made by cutting instruments, there is nothing more required, than the bringing the lips of the wound into contract by future, or bandage, provided the part will allow of it. But in wounds of the hips, or other prominent parts, and across some of the large muscles, the stitches are apt to burst on the horse's lying down and rising up. In such cases the lips should not be brought close together. One stitch is sufficient for a wound two inches long: but, in large wounds, they should be at the distance of an inch or more. And, if the wound be deep in the muscles, care should be taken to pass the needles

needle proportionably deep; otherwise, the wound will not unite properly from the bottom. Should the wound bleed much, from an artery divided, the first step should be to secure that, by passing a crooked needle underneath, and tying it up with a waxed thread. If the artery cannot be got at this way, an application must be made of some of the powder, or dust, of the puff-balls. And let it be once for all observed, that this is as good a styptic, if not better, than any that can be made use of. But, should that not be at hand, let a strong solution of blue vitriol, or oil of vitriol, be substituted in its room, care being always taken to apply the medicine close to the mouth of the vessel, and to keep it there, till an eschar is formed; otherwise there will be a fresh bleeding. After this, the lips of the wound being brought together by the needle or bandage, there needs only a covering with rags dipped in brandy, or a pledget of tow dipped in the friar's-balsam set forth in the appendix.

I cannot in this place omit the compositions of two very efficacious ointments in regard of wounds. The one is as follows, viz.

Take Venice turpentine and bees-wax, of each half a pound, a quarter of a pound of honey, half a pound of train-oil, and a quarter of a pound of yellow rosin. Melt these together, and, when the mixture is almost cold, add to it two ounces of verdigrease in fine powder, and keep stirring it, to prevent it from falling to the bottom.

This

This is the ordinary green ointment, and will cure any common wound; and, should there at any time be an occasion to make use of something stronger in order to consume any proud flesh that may arise, it will be requisite only to mix a little red precipitate with it, or to touch the part with blue vitriol.

The other, which is a tobacco ointment, is prepared in the manner following, viz.

Take half a pound of leaf-tobacco, and boil it in a quart of red wine to a pint. Then strain off the liquor, and add to it half a pound of tobacco finely powdered, a pound of hogs-lard, a quarter of a pound of rosin, four ounces of bees-wax, and two ounces of the roots of round-birthwort in powder. Make these ingredients into an ointment.

This is not only drying and detergent, but, from the narcotic quality of the tobacco, soothes the parts, and by that means prevents those irritations which are generally attendant on wounds and tumours. As for wounds in the legs, tendons, or joints, these must be dressed with balsamic applications without any mixture of what is of a greasy nature. The following will be serviceable on these occasions, viz.

Take Venice turpentine dissolved with the yolk of an egg, and honey, of each an equal quantity, a little tincture of myrrh, and make a mixture.

But,

But, where these ingredients are not at hand, let some nettles and salt, mashed well together, be bound on the part.

Wounds attended with a great heat and swelling should be plied with the fomentation already mentioned, or, in lieu of it, with a poultice of beer and bran, or oatmeal. These warm applications will very much assist towards thinning the juices stagnating in the part, and fitting them for transpiration, and will help to promote a kind digestion of the wound. Wounds from thorns are to be treated in the same manner; with this difference only, that in case the thorn be fixed, it will be requisite to apply some soft-soap and chalk mixed together, in order to draw it out. Should the thigh be wounded with a hedge-stake or any other instrument, it is to be first probed, and then some drops conveyed into it of the incomparable balsam, hereafter mentioned. I have frequently known a candle thrust up upon this occasion, and the orifice of the wound stitched up to prevent the candle from falling out, and to hinder the entrance of the air. This candle was kept in some days, till there appeared a laudable matter, and then the stitches were cut open, and the wound healed of itself without any farther assistance. Should the wound happen in the belly, the intestines are to be examined; and, in case these be penetrated, they must be sewed up immediately: though, in reality, a circumstance of this nature scarce ever admits of a cure. As for cutaneous incidents, one has nothing more to do in respect of them, than to stitch up the skin, and dress it

it with honey of roses, or the liniment recommended for wounds in the joints. In gun-shot wounds, where the ball has not penetrated too deep, it is to be extracted, if possible, together with whatever extraneous bodies may have passed in along with it, and the wound dressed with the tobacco ointment. The entrance of these wounds often requires to be enlarged, and a depending orifice should always be procured, if practicable. Should the wound not digest kindly, the poultice is to be applied to it, and the fomentation directed for scalds and burns from gun-powder. When the skin remains intire, let the part be covered with the rennet-bag of a calf, after it has laid in salt for some time, which will absolutely cure it. Should this not be at hand, let some bruised onions be applied, or the part fomented with spirits of wine and camphire. But if the skin be broke, let it be dressed with the following ointment, viz.

Take linseed-oil, red lead, and bees-wax, of each half a pound, and boil them a long time over a slow fire, till they are perfectly incorporated.

In case a fever comes on through any external ternal accident, it must be treated as other fevers according to the urgency of the symptoms.

C H A P. X.

Of ULCERS.

ULCERS proceed either from a depraved state of the blood and juices, or from too long confinement of the matter incident to a tumour or wound, from whence it acquires a corroding quality, which must necessarily prove destructive to the contiguous parts. These ulcers sometimes run in long pipes, and form a fistula, which generally arises from too great a pressure of the saddle on the withers. This accident is easily remedied in the beginning, before any matter is formed, by bathing the part once a day with some black soap, spirits of wine, and old chamber-lie mixt well together, and applied scalding hot; or with a poultice of cows-dung and cows-piss boiled together, and laid on hot. But should there be a collection of matter, the tumour must be opened; and, in case any callosities occur or pipes, the unsound flesh must be pared away with the knife, care at the same time being taken not to cut across any of the large muscles. Should the bone be found by probing to be carious or rotten, all the loose flesh in that case is to be cut away, and the bone by paring it cleared of its rottenness.

The poll-evil requires the same treatment as a fistula, the intention of cure in respect of all ulcers being to destroy the callosities, and to bring on a good digestion of the fore. When this is done, nature demands no further assistances to

to perform the rest. The dressing I have all along made use of on these occasions, as I ever found it of singular efficacy is the following, viz.

Take train-oil and oil of turpentine, of each a pint; and two ounces of oil of vitriol. To this add an ounce of verdigrease in fine powder, and half an ounce or an ounce of sublimate. Mix all well together, then pour in some of this mixture to the part, scalding hot; putting a little flax on it, and over the flax a sticking plaster, to confine the dressing till there be an appearance of a laudable digestion. After this, when the place has been washed now and then with a strong solution of blue vitriol in water, it may be dressed with the tobacco ointment.

Sometimes in a fistula the pipes descend too low to admit of their being opened; as they would not heal without great length of time and much difficulty. In such a case, let a long needle be procured, of frequent use in surgery, which is to be passed through the bottom of the part affected, to make a depending orifice, in order to give liberty for the matter to discharge itself. This must be kept open by passing a cord through in the nature of a hair-rowel.

The common practice of farriers in the cure of fistulas is to make a hole or two in the contusion, and to put in some sublimate, arsenic, or a caustic of that kind. But this management is not only very tedious, but attended likewise with great uncertainty and pain.

Should

Should any of these contusions succeed a fever, or any other distemper, by way of crisis, in order to nature's getting rid of what matter may overload and oppress her, the swelling in this case is to be encouraged, and warm fomentations applied to it and poultices, to bring it to a suppuration: and, when this is done, it must be opened the whole extent of it, and be dressed according to the quality of the matter. At the same time an eye is to be had to the condition the blood may be in, which is one very important article.

As for a bog-spavin, this is a fullness of the hollow part of the hock, and proceeds from strains and hard riding in the same manner as windgalls do. In order to its cure, an opening must be made in it, to let out the glutinous matter it contains; after which it is to be fired, and the strong charge applied to it.



C H A P. XI.

Of the DISEASES incident to the FEET.

I Do not look upon it to be at all necessary to give a detail of all the diseases that are wont to affect the feet of the horses; as several of them require the same method of treatment. I shall therefore only mention a few of the principal ones, and shall begin with sand-cracks. These sand-cracks are occasioned either by treads or blows, and are a little cleft on the outside of the hoof. If they run in a strait line downwards, and penetrate through the bony part of the hoof, the cure of them is often attended with some difficulty; and, when they pass through the ligaments that unite the hoof with the coronet, they are apt to breed a quittor, or false quarter, which is very dangerous. But, when the crack only penetrates through the hoof, without any matter being formed underneath, it admits of an easy cure, which consists only in cutting the edges of the crack thin, that the hard part may not press on the tender one. After that, let it be dressed with the tincture of myrrh, and be applied to it some of the following mixture, kept bound on with a garter very tight, viz.

Take some deer's sewet, tar, Venice turpentine, and bees-wax, and blend them well together, and make an ointment.

Where there is a necessity of travelling, this method must be accompanied with a bar-shoe, which will effectually secure the success of it, even were it a journey of a thousand miles through the worst of roads. But, should the crack be very deep, and matter formed in the part, it will be absolutely necessary to fire it, and to apply a strong charge, and after that to turn the horse out to grass for five or six months.

A quittor is an ulcer formed between the hair and the hoof, and usually on the inside quarter. It frequently arises from treads and bruises, and sometimes from gravel; which, by working its way upwards, lodges about the coronet. If it be only superficial, it may be cured by the above ointment mixt with some red precipitate. But should there be matter formed under the hoof, part of the hoof must be carefully pared away in order to come at the bottom, and all the fungous flesh cut out. And, should the bone be carious, it is to be scraped clean, and the ulcer dressed with the same medicines as were directed for the canker. When there is a necessity for taking the quarter off (which with care it may be, without any prejudice to the horse, only a little eye-fore), it then becomes a false quarter.

C H A P. XII.

Of WOUNDS in the FEET from NAILS, or any other ACCIDENT,

Accidents of this sort are very common, and sometimes, from want of early care, prove of bad consequence. For the parts, being naturally tender, are very susceptible of inflammations. And, when matter is once formed, if a free discharge is not procured, the bone, which is spongy, soon becomes affected, and the whole part then is in danger. The foot on this occasion is to be carefully examined immediately.

Should a nail, or any other extraneous body, be lodged in the foot, the first thing to be done is to extract that body. After which the wound is to be thoroughly washed with oil of turpentine. Then must be poured into it some turpentine, tar, and a little pitch melted well together; and the foot stuffed up with bran and hog's-lard. In order to remove the inflammation, the cold charge of armenian bole, vinegar, and the whites of eggs is to be laid all round the hoof and coronet. Should the foot not be restored by this method, one may suspect that something is left behind. In this case the wound must be laid open to the bottom, and the ulcer dressed with tincture of myrrh, in the first place, and afterwards with some detergent ointment.

In cuts of the feet from what cause soever, let them be immediately washed with a little brandy, or any other spirituous liquor; or, in defect of

that, let some nettles and salt stamp well together be bound on the part, which will have a very good effect.

As for soft and pumiced feet, these must kept as dry as possible, which is all that can be done in regard of them. For when nature has given a horse a soft foot, it is not in the power of art to make it otherwise without laming him. Hard, brittle hoofs, are to be kept stuffed with cows and hogs dung mixed together in order to preserve them moist, and to be frequently dabbed with old chamber-lic, which is one of the best remedies in the world; or you may use the following ointment.

Take six pounds of horse-grease or nerve-oil, Bees-wax and Venice turpentine of each two pounds, train-oil and tar of each a pound, Melt these well together, and keep stirring them till they grow cold.

Bruised feet are to be stuffed with linseed, soft-soap, and chamber-lic boiled well together, and stiffened with hogs-dung; which is the best method that can be used in regard of them.

C H A P. XIII.

Of the RUNNING-THRUSH, CANKER, and
Loss of Hoof.

HORSES are sometimes subjected to a running-thrush, and that without any ill consequence. The only care necessary on this occasion is to keep the feet clean washed out. Should, indeed, the matter become so corrosive, as to make the thrush fall off and breed an imposthume, in this case the imposthume is to be opened, and the sore washed out with old chamber-lie, and sometimes with a strong solution of vitriol in water. At the same time it will be proper to bleed, and give a dose or two of the diuretic balls prescribed for the greafe, in order to guard against any ill effects that may arise from putting a stop to these discharges.

A canker in the foot proceeds for the most part from thrushes when they are become putresied. Though, in reality, whatever is of a vitiating quality in regard of the blood and juices may produce this disorder. A canker is known by the corrosiveness of the matter, and its consuming the foot. In order to its cure, all the fungous flesh must in the first place be cut away with a knife, and after that pledgets of tow are to be applied dipt in the following ointment, viz.

Take a pound of honey, an ounce of verdi-
grease finely powdered, half an ounce of

F 3

double

double strong spirit of nitre, and two drams of sublimate. Mix these well together.

The pledgets are to be wedged in as tight as possible, to prevent the springing up of any future fungous flesh: and, indeed, half the cure consists in dressing the part properly. Should the horse be full of flesh, it will not be amiss to administer a dose or two of the diuretic balls. As to this disease, I under take it, no cure, no pay.







C H A P. XIV.

Of SHOEING.

MONS. La Fosse has established this article on so solid a foundation, that it is somewhat surprizing to me, that the method he recommends of shoeing is not become an universal practice. But O stupidity! stupidity! when thou hast once usurped dominion over the skull of man, how hard a matter is it to dethrone thee! Hence occur such a number of tender-footed, narrow-heeled, and corn-footed horses, the consequence of paring away so much of the foot as is daily done, and of course robbing the horse of what he was furnished with by nature for his support and defence.

Monf. La Fosse proves in the first place, that the weight of the horse is neither intirely upon the toe nor the heel, but betwixt both; so that a long shoe can be of no service, but, on the contrary, must turn out very detrimental. For, first, it is less solid; secondly, the horse's heels coming to sink upon those of the shoe, the longer the lever the greater will be the drag upon the nails near the toe; which will render the shoe always more liable to be pulled off; especially on a horse's over-reaching, or travelling in a heavy, clayey country, where it must take too much hold from being so long. Now, were the shoe only the length of the foot, this accident would be prevented. Again, a shoe, when the heels of it come betwixt the pavement, cannot well fail of

Wrenched off; and the longer it is, and the more it covers the foot, the more subjected will the horse be to trip, hobble, and fall, particularly if he goes upon a pavement; because the surface being formed of round parts, and the shoe not set on flat, but being of a large uniform hard face, he can scarce have above two or three points of support. What an absurdity is it then to imagine, that strong shoe-heels are an ease to the weak heels and fetlocks of horses, as if the body of the shoe were flexible enough to yield to the horse's heel. From this contradictory notion, the shoe-heel is raised, and a vacant space left between that and the horse's heels: whereas it is the hoof, which by its flexibility yields to the shoe-heel, so that the thicker the shoe-heel is, the more subject must that of the horse be to meet it. Hence, instead of being eased, the horse's heels become more compressed, inasmuch as they have always the same point of support.

In respect to the ill consequence of paring too much of the heels and foot away, it is to be remembered, that the horny part of the sole and hoof receives its moisture and nourishment from the fleshy sole, and its connection with it; that its juicy parts consist in its thickness; and that it hardens and receives less nourishment in proportion as it is thinned. Hence it is, that we daily see so many horses not only becoming wire-heeled, but absolutely affected with a downright lameness. Again the air, when the hoof is in this thin state, penetrates and dries it to such a degree, that, when a horse stands dry, in case of any neglect in regard of moistening his feet, they

they contract and compress the fleshy sole in such a manner as to lame him. But what danger is a horse threatened with, when his sole is almost gone through being pared too close? Should he happen to tread upon stumps, pieces of bottles or nails, or any sharp stones, they will immediately penetrate to the flesh underneath, and produce, perhaps, not only corns, but an incurable lameness. For a farther satisfaction in respect of this matter, I refer the reader to the treatise of Mons. La Fosse.

One thing is to be earnestly wished in regard of shoeing horses, which is, that, instead of making the foot fit for the shoe, care were taken to fit the shoe to the foot; and to order it so, that the shoe presses equally on all sides. The shoe should likewise be laid a little flatter to the foot, without all that hollow, which only serves to form a receptacle for gravel, and small stones, on purpose to lame the horse, that is into the bargain, by this injudicious conduct, deprived of half the support he would otherwise have. Neither ought the frog or sole to be pared, it being sufficient only to take down the edge of the hoof in case it be thought too long.

Since I wrote this, my lord Pembroke has published a treatise on horsemanship, wherein his lordship very justly shows the absurd practice of the common, ignorant, and stupid farriers, which I shall beg leave to give an abstract from.

" If your horse's foot be bad and brittle, they advise you to cover it with a very heavy shoe; the consequence of which proceeding is evident: for how should the foot, which before could scarce carry itself, be able afterwards to carry withal such a monstrous additional weight, which is stuck on too with innumerable nails, the holes of which tear and weaken the hoof: if the foot is cut or hurt, one doctor says, load it, by way of cover, with all you can: his conceited opposer as wisely counsels you, to let the horse walk bare upon the fore: the only absurdity all these simpletons seem to agree in, is to shoe with excessive heavy ill shaped shoes, and very many nails, to the total destruction of the foot. The cramps they annex, tend to destroy the bullet, and the cat walnut-shell shaped shoes prevent the horse's walking upon the firm basis, which God has given him for that end; they also open and cut away the inside of the animal's foot with their detestable butteris, and afterwards put on very long shoes, whereby the foot is hindered from having any pressure at all upon the heels, which pressure otherwise might still perchance, notwithstanding their dreadful cutting, keep the heels properly open, and the foot in good order. The frog should never be cut out; but as it will sometimes become ragged, it must be cleaned every now and then, and the ragged pieces cut off with a knife; in one kind of foot indeed a considerable cutting away must be allowed of, but not of the frog; I mean that very high feet must be cut down to a proper height; because, if they were not, the frog, though not cut, would still be so far above the ground,

ground, as not to have any bearing on it, whereby the great tendon must inevitably be damaged, and consequently the horse would go lame.

“ The weight of shoes must greatly, wholly indeed, depend on the quality and hardness of the iron: if the iron be very good, it will not bend; and in this case, the shoes cannot possibly be too light; care, however, must be taken, that they be made of a thickness so as not to bend; for, bending would tear out the nails, and ruin the hoof. That part of the shoe which is next the horse's heel, must be narrower than any where else (*as is seen in the draught*), that stones may be thereby prevented from getting under it, and sticking there, which otherwise would be the case; because the iron, when it advances inwardly beyond the bearing of the foot, makes a cavity, wherein stones being lodged would remain; and, by pressing against the foot, lame the horse. The part of the shoe, which the horse walks upon, should be quite flat, and the inside of it likewise; and only just room enough should be left next the foot to put in a picker (which ought to be used every time the horse comes into the stable, and often on marches), and also to prevent the shoe's pressing upon the sole. Three, or at most four nails of a side hold better than a greater number, and keeps the hoof in a far better state. The toe of the horse must be cut square and short, nor any nails driven there: this method serves to throw nourishment to the heels, and strengthens them, for on them the horse should in some measure walk, and the shoe be made of a proper length accordingly:

by this means, narrow heels are prevented, and a thousand other good effects produced. That my directions for shoeing a proper length may be more clear and intelligible, I have annexed a draught of a foot shoed of a proper length standing on a plain surface, and with it a draught of the right kind of shoe.

“ In wet, spongy and soft ground, where the foot sinks in, the pressure upon the heels is of course greater than on hard ground; and so indeed it should be upon all accounts. The hinder feet must be treated in the same manner as the fore ones, and the shoes the same; except in hilly and slippery countries, they may not improperly be turned up a little behind; but doing this to the fore shoes, is, I am convinced, of no service, and is certain ruin to the fore legs, especially to the bullets. In descending hills, cramps are apt to throw horses down by stopping the fore legs, when the hinder ones are rapidly pressed; which unavoidably must be the case, and consequently cannot but push the horse upon his nose. Ice nails are preferable to any thing to prevent slipping; but they must be so made, as to be, when driven in, a bare half inch above the shoe; and also have four sides ending at the top in a point: they are of great service to prevent slipping on all kinds of places, and by means of them an horse is not put out of his proper basis. The utmost severity ought to be inflicted upon all those who clap shoes on hot: this unpardonable laziness of farriers in making the feet fit shoes, instead of shoes fitting feet, dries up the hoofs, and utterly destroys them. The shoes,

shoes in England at present, that are contrived with the most sense, are what they call plates for the race horses at Newmarket: I do not say that they are perfect, but they are nearer the truth than any others I know; nor are they substantial enough for common use, though sufficiently so for the turf. I do not by any means recommend the practices at Newmarket in every thing; but in this particular circumstance certainly it has got the start of other people.

“ It is strange, that there should be so many ridiculous and absurd methods of shoeing, when it is so manifest, that a small share of common sense, with a moment’s reflexion upon an horse’s foot, cannot but suggest the proper one. Frequent removals of shoes are detrimental, and tear the foot; but sometimes they are very necessary: this is an inconvenience which half shoes are liable to (though excellent in several other respects); for the end of the shoe being very short, is apt soon to get into the foot, and consequently then must be moved. ”

THE END.

THE

A circular ink stamp from the British Museum. The words "BRITISH" and "MUSEUM" are curved along the top and bottom inner edges of the circle, respectively. In the center, the date "21 JY 81" is printed horizontally. There are small dots above and below the date.



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F I N I S.

THE JOURNAL OF THE
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A N

APPENDIX:

Wherein are set forth

The Nature, Virtue, and respective Properties of **SIMPLES** that enter **MEDICINAL** Compositions concerning **FARRIERY**.



THOUGH there might be no absolute necessity for annexing the subsequent Appendix to the preceding part of this work, yet, as I concluded it would be satisfactory to my readers to be apprised of the qualities of the materials made use of in the cure of horses, I was determined not to spare myself that trouble. Accordingly, I here present them with a narrative of the faculties of these ingredients, and that in as concise a manner as possible. I will begin with a detail of the roots.

OF

OF ROOTS.

Angelica. The chief virtue of this consists in its being a good carminative.

Birthwort. Of this there are two sorts, the long and the round, each of them being of the same efficacy. They have the character of resisting poison and malignity, and make a part of the composition of the diapente. They are very detergent and healing, and for that reason are made use of in ointments, and drawn off in tinctures with other ingredients, in order to cleanse wounds and ulcers.

Briony. This is of a very opening and cleansing nature, a great uterine detergent, and very penetrating; and therefore of service in all grumous collections of matter, and coagulations of the blood or juices.

Carrots. These are either yellow, red, or white, the last of which kind are not so useful as those of the other two. They are very beneficial in a dry, husky cough, and in asthmatical cases; and will sometimes prevent a broken wind, when every thing besides would turn out intirely ineffectual. I observed, when I was in Holland and in Flanders, that it was very rare to meet with a broken-winded horse; which I am apt to think is owing in a great measure to those horses feeding on carrots, which they do very plentifully. Carrots are certainly very attenuating,

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tenuating, and diuretic. They may be given once or twice a day, cut into slices.

Comfrey. The leaves, flowers, and root of this plant are used, and have nearly the same quality in them as marshmallows, being only of a little more mucilaginous substance.

Dock, sharp-pointed. This is a very powerful detergent, and an excellent anti-scorbutic; and on that account is beneficial in the jaundice, and all foulnesses of the blood, the natural source of obstructions. The juice of it likewise, made up into an ointment along with proper ingredients to give it consistence, will be serviceable as an external application in regard of foul ulcers and sores.

Elecampane. The root of this plant is stomachic, aperient, and diuretic, and excellent in all disorders of the lungs. For it not only attenuates and deterges, but heals any ulcers that may be forming in those organs.

Galangal-root. There are two parts of this root, one as small as one's little finger, hard, reddish, of an irregular shape, and of a very acrid, biting taste; the other larger, and spongy. The small part, which far exceeds the other in virtue, is a noble stomachic and carminative, and therefore is very properly administered in order to expell wind, and to restore a lost appetite.

G

Garlick.

Garlick. This is very opening and discussive, and good in all obstructions of the lungs. It is likewise stomachic, and a destroyer of worms; and, applied outwardly in poultices, will go a good way towards discussing obstinate swellings.

Gentian. This is a celebrated root, and stands at the head of the stomachic class. It is greatly aperient and discutient, a strong antidote against several kinds of poisons, as it wonderfully promotes both sensible and insensible perspiration. It is also a great destroyer of worms, and is very good to make a tent of, to open a passage in ulcers, where an instrument cannot be used with safety.

Ginger. This has the qualities of the galangal-root, but in a less degree.

Hellebore, black and white. These are pretty much of the same nature, being seldom or never given inwardly, being too strong: but they may very advantageously be used outwardly, by making a strong decoction of them to wash foul ulcers or sores with.

Horfe-radish. This is very opening and cleansing, and good to attenuate the viscous humours productive of obstructions in the small vessels. At the same time it strengthens the nerves, and rouses the spirits when they are too sluggish and unactive; and therefore is of service

in

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in dropfies, and the yellows, and other chronical distempers.

Jalap. This is an axcellent purge, though seldom given alone. As it is apt to gripe, it is generally accompanied with what is endued with a correcting quality.

Lillies. The roots of the white are only used, and those in emollient, softening, poultices. They are best when fresh taken out of the ground.

Liquorice. This is too well known to stand in need of a description. It is of admirable service in all disorders of the breast, either in respect of its juice, or its substance powdered and made into balls, with something to give it a proper consistence, of the same intention. I would advise those, who have occasion to make use it, to powder it themselves; it being no uncommon thing for persons, who buy it in powder in the shops, to find three parts in four of their purchase, powdered pease. An immortalizing instance of an unparalleled integrity!

Madder. The root of this is balsamic and detergent, and at the same time a very good aperient, which property renders it beneficial in the yellows, and a diabetes, or what is vulgarly and improperly termed the Go-pifs, for which I have recommended it.

Marsh mallows, common mallows, and mercury. I mention these together, as they have in a manner the same properties, being each of them emollient, relaxing, and diuretic. Hence are they serviceable in irritations in the bowels occasioned by heat, and particularly useful in stranguries. They will also help to ripen any swelling outwardly, by way of fomentation or poultice.

Onions. These are very pungent, and of a volatile nature, though not so strong as garlick. They are effectual in cleansing the urinary passages from slime and filth, and are said to be of service in disorders of the lungs, though seldom given for that purpose, as garlick is much preferable. But neither these nor garlick must be advised, where there is the least inflammation, because by their heat they would increase it. Onions are also good outwardly in poultices, to ripen or discuss swellings, and sometimes of service to rub up the sheath when a horse cannot stale, which inconveniency they are qualified for remedying by their stimulating faculty.

Piony. The root of the male piony is chiefly used, and is good in the staggers, and all convulsive disorders, in a decoction along with other ingredients of the like nature.

Rhubarb. In a lax, weak, habit of body, in an enfeebled state, particularly of the stomach and intestines, nothing can be of equal service to the

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the astringency of this root. It is beneficial likewise in the yellows, and disorders of the kidneys.

Monks-rhubarb. This grows in several parts of England, and has a resemblance with the other, but is less purgative. Its principal virtue consists in opening obstructions in the liver.

Squills, or sea-onions. These are very deterfive and cleansing, and have a peculiar faculty, when infused in vinegar, of scouring the vessels of the lungs, and freeing them from the phlegmatic matter so productive of hard-breathing.

Tormentil. The root of this is a powerful astringent, and on that account of singular benefit in all fluxes.

Turbith. This is of a very harsh nature, and therefore the reader ought to be cautioned against using it.

Turmeric. Of this there are two sorts, the round and the long; but the long is generally used in practice. It is greatly attenuating and opening, and almost as celebrated a specific in the yellows, as the bark is in agues.

Valerian. The wild valerian-root is warm, aromatic, and attenuating to a great degree; and therefore highly serviceable in the staggers, and all disorders of the nerves. It is best

given in decoction, along with other ingredients of the same class.

Virginia snake-weed, and contrayerva. I join both these together, as they answer the same intention of cure. They are recommended in malignant fevers, where the pulse is exceedingly low and depressed, and the blood so viscid, as to be scarce able to carry on the circulation. Should the horse be very restless, in this case it would not be amiss to add a little of the anodyne balsam, which will sometimes do wonders. These may be given in powder, made up into a ball with honey, or else by way of decoction.

Zedoary. This corresponds prettily closely with the nature of galangal, and is therefore used in order to answer the same intention.

OF HERBS and LEAVES.

Agrimony is greatly attenuating and detergent, and consequently beneficial in the yellows, and obstructions of the liver.

Angelica. Both the root and the leaves of this plant are cordial, carminative, and diuretic, and chiefly appropriated to cholicky disorders.

Asarabacca. This is only used as a stimulant up the nostrils to assist in unloading the vessels of the head.

Arse-

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Arse-smart. This grows in watery places, and is in flower in July and August. It is endued with attenuating and de-obstruent properties.

Brooklime, buckbean, dandelion, fumitory, ground-sell, horse-mint, liverwort, mugwort, pellitory of the wall, scurvygrass, speedwell, or paul's-betony, succory, and vervain. I have ranked all these together, as they partake of the same qualities. They are detergent, attenuating, and diuretic, and therefore of service in the jaundice, farcy, and whatever obstructions in the viscera, and all breakings out on the body, and even foul ulcers and obstinate sores.

Celandine. This is efficacious in regard of the same diseases as the former. And in the farcy there is not, according to my experience, a more powerful remedy. The juice of it effectually takes off specks and films from the eyes.

Centaury. The lesser is generally made use of. It is an excellent stomachic, and serviceable in all malignant distempers.

Camomile. The flowers of this plant are principally in request. They are a good carminative, and therefore of benefit in cholicky complaints.

Fennel. This is very penetrating, and adapted to the removal of cholicks, and disorders arising from crudities. It is also diuretic, and a

great cleanser of the kidneys, and uterine vessels.

Firr. The green tops of this vegetable are detensive, and attenuating: and a decoction of them will open all manner of obstructions formed either in the bowels, liver, or kidneys. As they are besides mucilaginous in their nature, and of course pass through the vessels without any material irritation, I would prefer them to turpentine, in cases where that drug is indicated.

Ground-ivy, hyssop, horehound, St. John's-wort, maiden-hair, scabious, Jew's-ears, and colts-foot. These are all balsamic, and vulnerary, and therefore good in disorders of the lungs, inward bruises, wounds, and ulcers.

Hounds-tongue. This thickens the juices, and is serviceable in catarrhs, and sharp defluxions, and in fluxes, and hæmorrhages.

House-leek. This is cooling and drying, and, worked up into an ointment with cream of tartar, will be very properly applied to the heels of horses affected with hot, sharp, oozings. Its leaves likewise, reduced to a poultice with barley-meal and vinegar, will be serviceable on the same occasion.

Marjoram. This plant is a very great drier, and good in all defluxions. It is besides esteemed as an antidote against poisons, and looked upon

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II

as of efficacy in malignant and epidemical distempers. It is best taken when fresh dried, inasmuch as all aromatics soon lose their virtues.

Mint. This is deemed a great strengthner of the stomach, and therefore of service in respect of a lost appetite.

Mistletoe. This is an excrescence formed on the trunks and branches of several trees. That of the oak is the most celebrated; though this, in reality, occurs but very rarely. It is certainly of benefit in convulsive disorders, and consequently adapted to the relief of the staggers, for which it is recommended.

Nettles. Nettles are remarkable for their faculty of stopping hæmorrhages, and for the check in particular they are wont to give to bloody urine. Pounded likewise in a mortar with salt, and applied to a part externally troubled with a discharge of blood, they will put a stop to it. They are also said to be of efficacy in preventing the bad effects of a horse's having eaten hemlock, or henbane. For my part, I aver, I am not acquainted with a better styptic, either as an inward medicine, or an external application.

Parsley. The root of this herb is principally regarded in pharmacy, which is very opening and discussive, and good in all disorders of the bowels proceeding from an adhesion of slimy matter to them. Being also a powerful diu-

retic, it cleanses the kidneys, and urinary passages, and of course, is proper in stranguries and the gravel.

Penny-royal. This plant is warm, and consists of subtile and penetrating particles, and will be of service in all fevers, where snake-root is recommended.

Plantain. This is cooling and agglutinating, and prescribed in some kinds of fluxes, and hæmorrhages. The juice of it is taken notice of as a healer and cleanser of wounds and ulcers.

Rosemary. This is of a warm and aromatic nature, and very good in the staggers, or in any disorder arising from too much humidity. The flowers of it are most in use.

Rue. Rue is a famous plant, and distinguished for the benefit it confers in malignant and pestilential fevers. It is also of benefit in nervous and cholicky complaints, and is a great destroyer of worms. It is a main ingredient likewise in some fomentations.

Sage. This is cordial, and at the same time a sweetner of the blood. It is serviceable also in nervous maladies arising from a cold cause. The juice of it will help sore mouths.

Sanicle, or All-heal. This is a very good astringent.

Savin.

Savin. This is highly detergent, and a great destroyer of worms, and its juice mixed with honey is used for cleansing foul ulcers.

Scordium, or water-germander. A decoction of this herb is of admirable use in several kinds of fevers.

Sea-moss, or coralline. This is a very popular medicine for worms.

Shepherd's-purse. It is healing and agglutinating, and therefore of service in hæmorrhages, especially in bloody urine. The juice of it applied to wounds soon cicatrises and closes them.

Sorrel. Sorrel is exceedingly cooling, and its root diuretic and therefore adviseable in stranguries.

Tansie. A decoction of this herb along with ingredients of a like tendency, will be very prevalent in regard of removing either uterine or cholicky complaints. Tansie is likewise diuretic, and an effectual destroyer of worms.

Tobacco. This is of the first class of anti-scorbutics, and of indisputable efficacy in respect of the grease, and foulness of the body, if chopt small, and given to the quantity of half an ounce a day for a month, mixed with the horse's corn. An ointment made from it is very powerful in cleansing wounds and ulcers:

Nor do I know a better expedient for the ripening of tumours. And the leaves steeped in chamber-lie will sometimes cure the mange.

Walnuts. A strong decoction of the leaves of the walnut-tree is good to wash all foul ulcers in the sinuous parts with; and I have known some sore legs healed by it, after all other medicines and applications had absolutely proved ineffectual.

Wormwood. This, together with bay-leaves, will answer the end of whatever fomentations can be made use of in order to disperse swellings.

Of FLOWERS.

Camomile. Camomile-flowers are a good stomachic and carminative: and clysters from a decoction of them are of service in cholicky disorders.

Elder. The flowers of elder are cooling and emollient, and frequently used in fomentations.

Poppies. The red corn poppy-flowers are chiefly used. They are gently anodyne and narcotic, and good in all cholicky pains. In a pleurisy they are a specific. Half an ounce of them powdered, and made up into a ball, are to be given three times a day, till the symptoms begin to disappear. It will be proper to wash them down with a hornful or two of a decoction of scordium.

Red

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Red Roses. These are an excellent astringent, and the honey of roses is an admirable balsam for all fresh wounds in the tendinous parts, and where bones are laid bare.

Saffron. This is one of the finest cordials in the whole Materia Medica, and there occur but very few diseases but what it is of benefit in.

Of FRUITS.

Apples. From these is produced verjuice, which is too well known, to stand in need of a detail of its use and virtue.

Berberries. These are very astringent, and therefore good in all loosenesses where astringents are proper.

Buckthorn-berries. The use of these no one can be ignorant of : on which account I shall pass them over in silence.

Cassia fistularis. This is seldom given alone : however, it is the principal ingredient in the lenitive electuary.

Cloves. These are very hot and carminative. The oil of them may be given to the quantity of half an ounce at a time to a horse in a lethargy, which I have known it remove when all other things have failed.

Figgs.

Figgs. These are of an emollient, mucilaginous and balsamic nature, and of course serviceable in irritating coughs incident to horses from a sharp rheum distilling on the lungs, which sometimes produces an inflammation of them.

Isinglass. This is prepared by means of a certain fish, the skin, intestines, stomach, fins, and tail, of which are boiled in water to the consistence of glue, and then dried till it acquires the solidity it makes its appearance with for use. It is inspissating, and in some degree anodyne: and useful in fluxes, and runnings of the reins. When a horse is continually letting fall his feed, two ounces of this boiled in a quart of milk to the consumption of almost half, and given in the morning fasting, will work an absolute cure.

Juniper-berries. These are of singular service both in respect of human bodies, and those of horses. They are de-obstruent, detergent, and balsamic; likewise stomachic, carminative, and diuretic, from which last quality they are of especial benefit in all disorders of the kidneys and urinary passages. Mr. Ned, an English groom, settled at Geneva for these thirty years past, assured me, that, after taking away a little blood, he never gave any thing else to his horses in all inward disorders, than a handful of the vulnerary herbs, a handful of juniper-berries powdered, and a handful of common salt in a mash, or along with their corn: and that he generally met with success from
this

this conduct, especially if he only repeated the expedient, and entered on it on the first appearance of any symptoms of a disease. Nor can we doubt of Mr. Ned's not having had sufficient experience in regard of this matter, as there have ever been upwards of sixty horses in his stable, which he himself always took intire care of.

As we are not furnished with the Swiss herbs, I shall recommend those in lieu of them that I have made use of with the same success, which are as follow: viz. Fumitory, water-germander, ground-ivy, mint, hyssop, flowers of St. John's-wort, flowers of mallows, agrimony, penny-royal, the herb scabious, sage, balm, the lesser centaury, and wild valerian. Let an equal quantity of all these be well dried and chopt together, and kept in a close box, to be used, with the specified juniper-berries and common salt, in the manner directed above.

Of SEEDS.

Aniseeds, cardamoms, carduus, wild carrot, coriander, cummin, caraway, dill, and fennel. These are all very carminative, and of course great expellers of wind from the stomach and intestines. On this account they frequently accompany purgative compositions. Nutmeg answers the same intention.

Fœnugreek-seeds. These abound with a soft, mucilaginous, juice, whereby they sheath and blunt

blunt the sharp, irritating matter, that sometimes accompanies ulcers in the lungs. They are likewise given with liver of antimony to prevent the action of too great a stimulus on the stomach, as they are also along with crude antimony for answering the same purpose.

Linseeds. These are soft and mucilaginous; on which account they are of service in disorders of the breast, kidneys, and urinary passages, and likewise as ingredients in emollient clysters. Their oil is also a most popular remedy in colds and pleuritic illnesses, and an absolute specific in troublesome irritations of the lungs, from the faculty it is endued with of bringing on a laudable expectoration.

Mustard-seed. This is very stimulating and deobstruent, and consequently highly proper in paralytic, convulsive, and all nervous complaints, either taken inwardly, or used by way of an external application. Mustard-seed also will very much contribute to the relief of those rheumatic pains horses are subject to, which frequently make them go lame, and, through a gross mistake, are concluded, by the common herd of farriers, to be humours. Two ounces of it may be given at a time morning and evening, either made into a ball, or mixed with a little warm beer. The success of this I have experienced on several occasions.

Of GUMS, BALSAMS, and inspissated JUICES.

Aloes. Of these there are two sorts, the socotorine, and the hepatic. The hepatic is stronger than the socotorine, and of course better adapted to the constitution of a horse. Aloes is one of the best purges we have; and, given in small quantities, so as not to go off intirely by stool, becomes an admirable alterative, by attenuating viscid humours, and removing obstructions formed in the finer vessels. And this it does without injuring the constitution. Which is a point worth every farrier's serious consideration, and will, no doubt hereafter, be the favourite object of the thoughts of those practitioners, who, as the late Mr. Dryden said on another another occasion, stand not confirmed in full stupidity. Aloes is a powerful destroyer of worms, and its tincture a great cleanser of wounds and ulcers.

Ammoniacum. Gum ammoniac is a known opener, and thinner of viscous, phlegmatic humours, and is used with good success in disorders of the lungs. The best way of giving it, is to form it into balls.

Assa-fetida. This is of eminent service in the staggers, and indeed, in all convulsive distempers, and whatever diseases that owe their origin to grumes and viscidities in the blood and nervous fluids. This cuts off all manner of necessity of putting one's-self to the expence of
amber,

amber, or even castor : especially as this drug is furnished with full as efficacious powers, as those other, tho' more chargeable ones.

Balsam capivi. This takes place wherever turpentine is indicated, and corresponds with the same intentions of cure.

Barbadoes tar. This is balsamic, and a good remedy in disorders of the lungs. But, as it is a difficult matter to meet with it genuine, thro' a strange propensity some people have of imposing on us for the sake of their interests, I always substitute the common tar in its room. Tar is also of benefit in outward applications, in regard of burns and chafing, occasioned by a tightness of the girths, and good to be stuffed up wounded and bruised feet.

Benjamin. This is too expensive to be made use of. However, no ill consequences can flow from thence, as several things of little cost may be substituted in its room, that will answer all the same purposes.

Camphire. This is of excellent service in fevers attended with a thick, heavy blood, and in obstinate obstructions, as it is a powerful attenuant and rarefier. It is likewise very beneficial in regard of its being used as an outward application, as it will help to dissolve any grumous matter a part may be labouring under.

Dragons-

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Dragons-blood. This is a very good astringent and used in that intention in fluxes.

Euphorbium. This is sometimes applied to bones that are laid bare, or become foul, in order to promote an exfoliation of them. It is also an ingredient in ointments, where the intention is to cleanse and deterge foul ulcers.

Frankincense. This is chiefly used outwardly as a ripener, or drawer, and enters the composition of some sticking plaisters. It is sometimes recurred to as an expedient to perfume the head in violent colds, and in fevers, in order to promote a discharge of matter by the nostrils.

Gum Arabic. This is a thickener and softener, and of course serviceable in a thin and sharp state of the fluids. It easily dissolves in water, and is useful in all kinds of fluxes, when genuine: but to meet with it genuine, is a very extraordinary incident, and intirely owing to a dreadful scarcity of our common plum-tree gums to mix with it.

Gum Galbanum. This is used in plaisters in the same intention.

Gum Guaiacum. This is drawn from the wood, and is endued with the same virtues, only in a much higher degree. It is of great service in obstructions and viscidities; on account of its
dis-

diffipating by insensible perspiration superfluous moistures attending the body. But as this gum is chargeable, guaiacum-wood may be substituted in its room; the best method of giving which, is in decoction.

Mastich. This is a great strengthener, either used inwardly, or outwardly in plasters.

Myrrh. This is a most excellent drug, and of benefit in a number of diseases taken inwardly, particularly in fevers of the malignant kind. It is adapted to disorders of the kidneys and urinary passages: and its tincture is a celebrated external remedy, from its cleansing and deterfivè quality, in a foulness of the bones, and sinews.

Olibanum. This is seldom given inwardly, but is made use of in strengthening plasters.

Opium. This is a most powerful narcotic, and, consequently of admirable benefit in all violent and raging pains.

Pitch, common, and that of Burgundy. Both these kinds are endued with much the same virtues. They are warm, discutient, and suppurating; and on that account employed externally, to dissipate any congelation of matter formed near the surface of the body.

Rosin. This is a powerful opener and diuretic, participating very much of the nature of turpentine.

pentine. It sometimes is made use of in drinks calculated for the discharge of urine, but great caution is necessary in the administration of hot, stimulating, drugs; inasmuch as ingredients of that class, should the disease be attended with a fever, would unavoidably increase it, and render the cure more tedious and difficult.

Scammony. This is too strongly purgative to be given with safety, after whatever manner prepared, Nor is there any occasion for having recourse to hazardous medicines, when we are abundantly supplied with what act upon bodies without the least apprehension of any detriment that can arise from the exhibition of them. The notion of specific purges is very absurd, one kind of purges answering the end as well as another, which is to promote an evacuation of redundant matter, by the canal of the intestines. Nothing, in my opinion, will effect this with greater security than salts, administered in a quantity proportioned to the horse's constitution, which are therefore preferable to all adhesive resinous purgatives in nature.

Storax. Of this there are two sorts, the one hard, and the other liquid; but the former is chiefly made use of, being an excellent balsamic and pectoral, and therefore good in all disorders of the lungs: and, as it is endued with a fine scent that is penetrating, becomes serviceable in the staggers, and all convulsive maladies.

Tragacanth,

Tragacanth. Gum Tragacanth, or dragant, is soft and agglutinating, and consequently of relief in sharp rheums and defluctions, which, when excessive, are productive of inflammations.

Turpentine. Of this there are several sorts, but they all act pretty nearly in the same manner.

Turpentine is produced from trees of the fir or pine kind. It is brought to us from different parts of the world, and very deservedly stands in the foremost rank of balsamics, vulneraries, and detergents, and is both of external and internal use.

Of Woods and BARKS.

Box. This is a great drier, and may be used in the same intention as the guaiacum-wood.

Cinamon. This is very grateful to the stomach, and, being astringent to a great degree, is of eminent service in loosenesses. The principal objection against its use is the expensiveness of it.

Mace. This is the outer rind of the nutmeg, and therefore of the same virtue. They are both carminative, and of course correctors of what may cause wind in the stomach or intestines.

Oak-bark. Oak-bark is a good astringent, and of service in stopping loosenesses, where remedies of that nature are proper.

Peruvian,

Peruvian, or Jesuits bark. This most celebrated production of nature is too well known to stand in need of any description. It is of a singular benefit in all weaknesses and relaxations of the parts, and very efficacious in removing a continual propensity a horse may sometimes have to sweat. But its use is now extended even to mortifications, which is a lucky incident in respect of Farriery, as mortifications sometimes succeed the nicking and cutting of horses. My method of proceeding, in case of a mortification, is to give a decoction of this drug accompanied with a little oak-bark, or else an ounce of it, and sometimes two at a time in substance made into a ball with conserve of roses, to be repeated every six hours, till the symptoms abate. As for its mechanical operation on the body, the reader may consult Sanctorius's aphorisms, where he will find that matter fully discussed.

Pomegranate-bark. This is a great astringent, and consequently of use in relaxed cases.

Saunders. Of this drug there are three sorts, viz. the yellow, white, and red. It is prescribed in decoctions along with guaiacum-wood, and is used in the same intention.

Sassafras. This an excellent sweetner of the blood, and used in decoctions for that purpose.

Winters-

Winters-bark. This is warm and aromatic, and reckoned serviceable in disorders of the head and stomach.

Of ANIMALS, and their PARTS.

Bears-grease. Whatever popular opinion may be entertained in regard of the superiority of this grease over the fat of other animals as to its penetrating quality, for my part, I cannot help thinking with Dr. Braken, that the fat of all quadrupeds is alike in respect of the operation expected from it, which is to relax and soften the tone of the fibres so, that more space be allowed to the inclosed matter for its rarefaction, which will promote its return into circulation, or determine it to a state of putrefaction, and thereby render it the fitter for a discharge. The manner of using fat being obvious to every one, it is needless to say any thing on that head.

Cantharides, or Spanish flies. These are what constitute blister-plasters, which are subservient to the draining off thin, serous, humours, and by stimulating to dissolve hard excrescences. They are also sometimes given inwardly in disorders of the reins, when they are clogged with a viscous matter obstructing the exit of the urine, which by their extremely pungent property they will promote a discharge of. But great caution and circumspection are necessary on this occasion, otherwise the remedy will be of worse consequence than the disease.

Cows-

Cows-piss, and sheeps-piss. These are both of a very penetrating and attenuating nature, and on that account of service in helping to disperse any viscid, phlegmatic swelling, by bathing the part with them very hot.

Crabs-claws, crabs-eyes, and the inside of oyster-shells. All these, when dried and calcined, are good to absorb any acidity or sharpness in the stomach and first passages.

Eggs. The yolks of these are used mixed with turpentine, in order to soften and abate the sharpness of it; which renders it of service in the cure of wounds. Turpentine managed in this manner being one of the best digestives we have. The whites are used in a cold charge, as an astringent, and repellent.

Hartshorn. The spirit of it is good in nervous cases, and the calcined or burnt hartshorn is intirely of the absorbent class.

Honey. Honey is penetrating and deterging, and of service in regard of viscid and tough humours. In infarctions of the lungs it is very efficacious, as it powerfully promotes a discharge of the phlegmatic matter that loads them. From whence it is no wonder, it is of such general use in coughs. It is sometimes an ingredient in detergent ointments. From honey is extracted bees-wax, which is gently heating, abstergent, and attracting, softens indurated parts, alleviates pains, and cicatrizes

H

ulcers.

ulcers: on which account it is often used in ointments.

Milk. Milk is of very great benefit in clysters, and will cool, soften, and heal the intestines, when even their very mucus is torn off by a hot, sharp, irritating matter. It is likewise of singular benefit in poultices, in order to assuage heat and inflammations.

Sperma-ceti. This is an oil, which comes from the head of a whale, and acquires this consistence from boiling. It is an excellent remedy in all sharp rheums, producing a dry husky cough, and in disorders of the urinary vessels, by relaxing the crispy tone of the fibres, and allaying the irritation from whence those disorders proceed.

Viper. The fat of this is penetrating to a great degree, and an infallible cure, in regard of horses, for the bite of any venomous animal, if applied immediately.

Urine, or chamber-lie. This abounds with volatile salts, and is, on that score, very penetrating and attenuating. Hence it becomes an useful remedy for those coughs in horses, that are caused by a viscid matter clogging up the vessels of the lungs. It is also of service outwardly, in the same diseases as cows-piss is.

Wood-lice. These are very deterfive and cleansing, which faculty of them is owing to a nitrous

nitrous salt, with which they are impregnated in consequence of their manner of living. Hence they are of service in all viscidities of the blood, and scour even the minutest passages. Being a good diuretic, they are beneficial in a jaundice, and in obstructions of the kidneys and urinary passages; and even in convulsive disorders. They are to be given, in regard of horses, made up into a ball, with a proper vehicle, after being stamped in a mortar.

OF MINERALS.

Alum. This is a very great astringent; and when calcined or burnt becomes much more so.

Arsenic. This is a very harsh caustic, and on that account is by no means to be used.

Nitre. Nitre abounds with a volatile sulphur, and mercurial spirit, included in a saline matter, proceeding from earth and water. Hence it operates in a complicated manner, and becomes a very powerful agent in regard of several stubborn disorders. It strongly resists putrefaction, and is of the utmost efficacy in malignant and pestilential fevers. Being cooling and diuretic to no small degree, it is also of excellent service in stranguries, and a heat of urine.

Salt. A handful of common salt is sometimes mixed with the horse's corn, or dissolved in a mash, when the stomach is loaded with a viscid, slimy matter, in order by its stimulating faculty to discharge it. It is likewise sometimes an ingredient in clysters, to assist them in their operations.

Vitriol. Of this there are six sorts; but the white and the Roman are principally made use of, and that in collyriums for the eyes. They are of benefit also in rheums and inflammations, and contribute towards the drying up watry oozings and transudations through the skin. The Roman is in vogue for stopping hæmorrhages, and destroying superfluous flesh.

OF METALS.

Antimony. This is of an established character, as an anti-scorbutic. It is a sovereign remedy in all foulnesses of the blood, particularly in regard of the grease in horses: on which occasion a pound of it may be given at a time, rolled up into balls with butter. The liver of antimony is an excellent alterative, of which I shall speak more by and by. One thing is to be observed in respect of these hard substances, which is, to take care they be finely levigated. Otherwise they will never enter the lacteals, and mix with the blood, on which depends entirely the success expected from them.

APPENDIX.

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CREAM of TARTAR and ANTIMONY.

As I have recommended cream of tartar, I shall just say a word or two of its effects. First, it is one of the best purges I know of, performing its operation without any griping or uneasiness. It likewise corrects the aloes, and prevents it from irritating the stomach and intestines so much as it otherwise would do. It is also a very fine gentle diuretic, and, given in a small quantity, becomes a most noble alterative, strengthens the stomach, and assists digestion. Besides these properties, it allays all violent and preternatural fermentations in the blood.

As to antimony, having been a little defective in regard of displaying the virtues of that noble medicine in my Treatise on Farriery, it will not, I apprehend, be any ways improper to perform that task here, and to point out the forms I think it would be most serviceable to be taken in.

First then, I should advise the infusion of antimony in beer (to be spoken of by and by) to be given to horses preferably to the substance, for the very same reason that Dr. Huxham assigns in regard of the exhibition of it to human bodies. For, as he very justly observes, antimonial preparations are very uncertain in their operations, sometimes lying a long time in the stomach and bowels, before they exert any sensible effect. This I myself have seen in respect to horses. For, on opening horses that have died whilst under a

course of antimony, I have found large quantities of it in the stomach and intestines.

Besides, when antimonials are given in substance, they must first undergo a dissolution in the stomach, before they can pass the lacteals, and be mixed with the blood so as to act as an alterative, diaphoretic, &c. Now, in a liquid where antimony is infused, the sulphurous and reguline part of it is already dissolved, and most exquisitely attenuated; so that it passes into the blood with the utmost facility, and easily mixes with the animal juices, and, given in a proper quantity at a time, acts as an alterative and diaphoretic, passing through the inmost recesses and ultimate ramifications of the whole vascular system with little or no disturbance to nature, and yet evidently promotes all the animal secretions and excretions, particularly those of the skin, intestines, urinary passages, and salival ducts, by gently irritating the whole nervous compages and that of the vessels. And, indeed, a stimulus of that nature is very often highly necessary in the extremest ramifications of the sanguinary, serous, and lymphatic arteries, where the motion is naturally exceeding slow, and where a stagnation and consequently corruption of the serum and lymph are very apt to generate a putrid colluvies.

Now this medicine, by universally stimulating not only the greatest, but also the minutest vessels of the body, greatly tends to remove all obstructions formed, or forming even in the smallest canals. Hence it becomes serviceable in the staggers, convulsive disorders, surfeits, farcy, and in short, in removing all obstacles whatever to a horse's

horse's thriving. My manner of using it with good success, is the following : viz.

Take four gallons of ale, and put into it the bark of guaiacum and sassafras, of each a quarter of a pound, half a pound of liquorice, six ounces of aniseeds, two large handfuls of male Speedwell, and a pound of liver of antimony tied up in a cloth bag. Infuse these gently for an hour or more over a slow fire. Then strain off the liquor, and put it into a large stone bottle, and keep it close stopped up for use.

A pint of this may be given to the horse every morning as long as occasion may require it, whenever antimony is directed. This likewise will be serviceable to a horse just taken up from grass, with the addition of an ounce of flower of sulphur and half an ounce of castile soap in each pint for three or four days, his body being kept open at the same time with mashes; which would be attended with much better effects, than the absurd custom of purging, as it would by no means hurt the horse's constitution.

Should any one be desirous of seeing more concerning antimony, I refer them to that very judicious piece of the learned Dr. Huxham, which is worthy the perusal of every body that makes use of this drug. One piece of advice I shall give to the public : viz. That whenever any preparation is wanted either of antimony or mercury, it be bought at Apothecary's-hall, where it will be

ever met with genuine, and pulverised in the best manner, which is a main end to be answered. For when these are not rightly prepared, the intention of ordering them is of course frustrated. And, indeed, in regard of all other medicines it would be adviseable to apply for them at the same place, as the goodness of them would abundantly ballance the supernumerary expence in purchasing them there.

As I have insinuated how I look upon Venice-treacle, Mithridate, and Diascordium as dangerous compositions when not properly made use of, I shall here exhibit a prescription for preparing a medicine in lieu of them, communicated to me by a very eminent farrier of upwards of forty years practice, which I have seen most surprizing advantages from, in distempers I shall mention by and by. And though I do not approve of a multiplicity of ingredients in any one composition, yet, from the experience I have had of it, I take upon me to pronounce it far superior in its extraordinary effects, to either Venice-treacle, Mithridate, or Diascordium. As there is no opium in it, that may be added as occasions shall require. The receipt runs thus: viz.

Take four ounces of aniseeds, turmeric, elecampane, liquorice-root, gentian, birthwort, fenna, flower of brimstone, cream of tartar, tormentil, monks-rhubarb, fennugreek, myrrh, butter-bur, juniper-berries, gum arabic, scordium, ginger, and vervain-root, of each two ounces, an ounce of saffron,
four

Four ounces of oil of olives, and, with a sufficient quantity of honey and common treacle in equal parts, work these ingredients into a paste, to be kept in a glazed earthen pan close covered up for use.

The general dose of these balls is an ounce and a half to be given to a horse on an empty stomach mixt in a pint of warm ale, the horse fasting two hours after, or in proportion to the disease. A dose or two of these balls with half an ounce of castile soap, will likewise go a good way towards a cure of the jaundice. In the staggers also, an ounce of them dissolved in a pint of warm ale, with half an ounce of the anodyne balsam, after plentiful bleeding, will give immediate relief, especially if accompanied with proper clysters. In a low depressed state of the spirits, occasioned by too great a viscosity of the blood and animal juices, the use of them will likewise be of the utmost service. Moreover, in all obstructions of the lungs unattended with any material degree of inflammation; in surfeits and indigestions; in short, in almost all distempers incident to horses, where no great inflammation subsists; these balls, from their carminative, diuretic, hepatic, vulnerary, detergent, balsamic, and stomachic qualities, will be found endued with sovereign efficacy.

Cinnabar. Of this there are two sorts, the native and factitious. The native is very heavy, and of a fine red colour. It is composed chief-

ly of sulphur and quicksilver, which renders it a very efficacious medicine in disorders of the head, and in the staggers, and all convulsive maladies: inasmuch as by its subtilty and solidity it is enabled to pass through the minutest passages, and by its momentum to break thro' the obstructions, which in the fibres and nervous meanders, are the occasion of those disorders. The factitious cinnabar is prepared in the manner following: viz.

Take fifteen ounces of quicksilver, five ounces of common brimstone, and two ounces of crude antimony. Mix them well together in a luted bolt-head in a naked fire, and let the fire be high enough to make the head red-hot, and the cinnabar will arise. This is used in the same intention as the other.

Lead. This is never made use of unprepared. Sugar of lead, and red-lead, two of its preparations, occur sometimes in practice. Red lead is made by melting any quantity of lead in an unglazed earthen pan, and stirring it over the fire till it becomes a powder: and, when it is thus calcined, it is put into a reverberatory fire for three or four hours. It will turn red, and is then called minium. This is of a drying nature, and applied outwardly in ointments.

Salt or sugar of lead. Take any quantity of lead. Dissolve it in aqua fortis, which, if good, will dissolve near its own weight. The dissolved lead

lead will soon become a saccharum in the bottom of the glass. A considerable quantity may be obtained this way in half an hour in a small glass set in sand or ashes, and in no great heat; or in a fire shovel over the fire. I have set down this method of preparing it, because it is attended with very little trouble. This is cooling, restraining, and repelling, and of great use externally in unguents for drying up moist ulcers; and a little of it dissolved in water makes an excellent collyrium for the eyes. It is of too cold a nature to be used inwardly, as it would in all probability be very hurtful to the stomach.

Quicksilver. Of mercury, or quicksilver, there are various preparations, and all of them of eminent service in their respective departments.

OF EARTHS and STONES.

Armenian Bole. This is a most excellent astringent, and of service inwardly in loosenesses, wounds, bruises, ulcerations, and all kinds of rheums and defluxions, and outwardly in charges to strengthen any relaxed part.

Brimstone. This is very balsamic and detergent, beneficial in disorders of the lungs, and a great purifier of the blood. The flour is generally ordered: but, for my part, I always make use of the stone-brimstone finely powdered, as it retains a good deal more of its natural properties, than any of its preparations do. It is

likewise of the greatest service outwardly, in ointments for the mange.

Chalk. This is endued with very absorbent qualities, and consequently powerfully corrects the juices of the stomach and first passages, when they turn sharp and acid. It is, as Mr. Gibson observes, of efficacy, when horses long to eat mud and clay out of walls, which is a sign of the predominancy of an acid.

Earth Japan, earth of Lemnos, earth of Samos, and sealed earth. These are all of an absorbent, drying, and astringent nature, and therefore remarkable for stopping fluxes of the belly.

Lapis calaminaris. This is a great dryer and absorbent, and is sometimes used in collyriums for the eyes.

Lime-stone. This is an absorbent, and sometimes used in diet-drinks, in order to dry up any superfluous moisture of the glands. But the application of it outwardly is a hazardous practice.

I shall just mention a few things, that have not as yet been spoken of.

Agarick. That of the oak is generally used, which is somewhat like a mushroom, being fungous. It is lately come into practice as a great

great styptic: but I prefer the puff-ball on this occasion, which I made mention of above.

Lees of wine. These are used with good success in a fomentation for any relaxed part, and will sometimes do more in that case, than either vinegar or verjuice. This effect of it proceeds from not only its abounding with spirits, but also from the sharpness it contracts by means of the tartar it is impregnated with. The French and Italians apply nothing else to all strains that occur; and after hard-riding, which is a very sagacious practice, alway foment the horse's legs with them, made very hot. but, as we cannot procure this remedy so readily as they can, we are forced to substitute old verjuice in its room.

Soap. The Venice or Castile soap is generally made use of inwardly: but, where neither of these is to be come at, one may have recourse to common hard-soap, which is of great efficacy in the jaundice, and disorders of the kidneys, and in most obstructions occasioned by a visciduity of the juices, as it is warm, attenuating, and detergent. The soft soap is only used externally, which being very penetrating is adapted to the removal of any congelation in the blood or juices.

Soot. This is very astringent in its nature, and makes a good application, mixed with yeast, to sore backs, and is sometimes made use of, in order to stop a mortification.

Vitriol,

Vitriol, elixir of. This is a popular medicine for a weak stomach in a horse after a fever, or any other debilitating distemper. The quantity of half an ounce of it at a time may be given once or twice a day, when the stomach is most empty, in a pint of water, or a decoction of scordium.

AN ANODYNE BALSAM.

Take an ounce of Castile-soap, half an ounce of opium, six drams of camphire, a dram of saffron, and eighteen ounces of rectified spirit of wine. Digest these in a sand-heat ten days, shaking the vessel between whiles till the last day or two. Then pour off the balsam clear for use. Where there is no conveniency of a sand-heat, recourse may be had to a dunghill.

For this we are obliged to the famous Dr. Bate, physician to king Charles the Second. The composition, perhaps, has not its equal in the whole extent of medicine for procuring ease in the most excruciating pains: which it not only alleviates by its opiate powers, but by its attenuating qualities, promotes at the same time a discharge of the humours, from whence those pains are derived. Half an ounce of it in a little warm water, accompanied with four ounces of sweet-oil, will sometimes remove the most inveterate windy cholick. But as to a cholick arising from a costive habit, the body must first be opened by clysters, after which this may be given to allay the pain.

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This balsam is also of singular service in the jaundice and gravel, as it relieves the obstructed liver, and cleanses the urinary passages to a great degree.

SALT OF TARTAR, and CREAM of TARTAR.

The salt of tartar is used as a corrector in some medicinal compositions. The cream of tartar is a gentle purgative, and at the same time diuretic, which makes it serviceable in several cases on a double account.

RED PRECIPITATE.

This is a preparation from crude mercury and aqua-fortis, and, mixed in ointments, is a great cleanser of foul ulcers.

SAL PRUNELLA, or CRYSTAL MINERAL.

This is very cooling and diuretic, and, consequently, very beneficial in fevers, and where a discharge of urine is to be encouraged. It may be given to a horse from one ounce to two.

BALSAM of SULPHUR with OIL of TURPENTINE.

This is one of the best preparations made from brimstone. It is admirably cleansing and balsamic, as it possesses not only all the virtues of the brimstone, but also of the turpentine, which makes it work very much by urine. It is of excel-

excellent service in coughs and ulcerations of the lungs, and likewise of the kidneys, which it effectually heals. It may be very properly given to horses in balls along with some of the vulnerary herbs.

BALSAM of SULPHUR, with OIL of ANISEEDS.

This is both balsamic and carminative to a great degree, and good in disorders of the breast, and any other proceeding from a flatulent cause.

I shall now exhibit the recipes of some few particular medicines of experienced efficacy, omitted above in the treatment of diseases.

BALLS for the GRAVEL.

Take six ounces of Strasbourg turpentine. Dissolve it in the yolks of three or four eggs. Then add to it the seeds of gromwell, burdock, and ransey, of each three ounces, two ounces of the syrup of marshmallows, and make the whole up into balls with flour. Let a ball of this composition of about the bigness of a hen's egg be given twice a day, and washed down with a decoction of mallows. This will effectually force away any fabulous matter, that may have made a lodgment in the urinary passages: but great care and circumspection are necessary in the administration of it. For where the least degree of inflammation is attendant on the obstructed

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obstructed part, in this case it is advisable to accompany the use of these balls with manna, oils, and emollient clysters, in order to relax the vessels, and by that means procure a less painful exit for the offending matter.

A BALL for the STAGGERS, and CONVULSIVE Disorders.

Take an ounce of wild valerian-root in powder, six drams of assa-foetida, and half an ounce of cinnabar of antimony. Let these ingredients made into a ball be given once or twice a day, according as circumstances may require.

A DRINK for the YELLOWS.

Take turmeric and Castile-soap, of each an ounce and a half, two drams of salt of worm-wood, a dram of saffron, and an ounce of treacle. Mix these in a pint of beer warmed, and let them be given every other morning for three mornings on an empty stomach.

CORDIAL BALLS.

Take figs and raisins, of each four ounces, fennugreek-seeds and aniseeds, of each two ounces, an ounce of gentian, two ounces of juniper-berries, an ounce of myrrh, two ounces of turmeric, half a pound of liquorice-powder, two drams of saffron, syrup of
of

syrup of coltsfoot and of marshmallows, of each four ounces, six ounces of honey, and an ounce of balsam of sulphur prepared with oil of aniseeds. Let the whole be made up into balls with flour; to which may be added occasionally some oil of sweet almonds to preserve them moist. These balls may be kept in a pot or bladder, close stopped up for use.

These will very well answer their title, and be of service in the yellows, and all cholicky disorders.

The following composition is recommended as an established remedy from experience for coughs and asthmatic affections of the lungs.

Take juniper-berries, aniseeds, fanugreek-seeds, and cummin-seeds, of each two ounces, four ounces of elecampane-root, half a pound of the flowers of sulphur, honey, and tar, of each four ounces, two ounces of garlick, six ounces of cold-drawn linseed-oil, an ounce of balsam of sulphur, prepared with oil of turpentine, and three or four ounces of syrup of horehound. Make these into balls, with powder of liquorice.

One of these balls of about the bigness of a hen's egg may be given in the morning fasting, and continued for some time, a day or two now and then intermitted, that the horse's stomach may not be too much cloyed.

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An OINTMENT for CONTRACTIONS.

Take any quantity of the shank-bones of deers, and break them into two or three parts, or more. Then put them into a strong earthen pan, and cover them with strong stale-beer. After that let them stand all night in a hot oven, and the next morning drain off the liquor from the bones, and keep it close stopped up for use.

This is a most efficacious ointment for horses legs when they are become stiff in consequence of hard riding, and the sinews contracted, or in paralytic numbnesses, and cold pituitous disorders in the legs and pasterns. To render it still more penetrating, a little camphire may be added to it. Previously to its application, it will be proper to foment the part with something hot, in order to open the pores, that the ointment may the better mix itself with the fluids.

OINTMENT of MARSHMALLOWS.

Take any quantity of the roots of marshmallows, fennugreek-seeds, and linseeds, and boil them to a thick mucilage. Then take two pounds of the mucilage, four pounds of oil of olives, a pound of wax, half a pound of rosin, and two ounces of turpentine. Mix all together over the fire, and make an ointment. The mucilage should be strained from the roots and seeds, and boiled with the

the oil till all the watery parts are wasted, and they are thoroughly incorporated.

This is a good medicine to mix with poultices, in order to ripen and suppurate any swelling, such as the strangles or vives. Though sometimes it has a contrary effect, and helps to disperse them.

A LINIMENT to bring HAIR on.

Take pidgeon's dung and honey, of each an equal quantity. Make a liniment, and rub it on the place affected every other day.

A BALL for the JAUNDICE or YELLOWS.

Take four drams and a half of Barbadoes aloes, six drams of woodlice, an ounce of the best hard-soap, two drams of depurated salt-petre, cochineal and camphire, of each a dram, two scruples of opium, and forty drops of oil of aniseeds. With a sufficient quantity of syrup of marshmallows make these ingredients into a ball.

This is a very attenuating, detergent, and diuretic composition, and of course very efficacious, on account of those de-obstruent qualities, in freeing the blood from whatever viscous matter may prevent the secretion of the bile from its mass, by the office of the liver, an obstruction of which organ of an animal body is the source of the jaundice. This ball is to be given to a horse every

every other day in the morning fasting, till there appear a manifest abatement of the symptoms: which there will absolutely be in a competent space of time; especially should it be accompanied with proper food and exercise.

As opodeldoc is a popular remedy, and indisputably a very good composition, I shall here exhibit the manner after which I have constantly prepared it: viz.

Take two quarts of rectified spirits of wine, two ounces of gum tacamahaca, and an ounce of gum caranna. Digest these for ten days or more in a hot dunghill. Then strain off the spirits, and add to them a pound of the best hard-soap cut in slices, and let it dissolve. After that add two ounces of camphire, the chymical oil of rosemary, oil of thyme, and oil of turpentine, of each half an ounce, a dram of saffron, and a dram and a half of the tincture of opium.

This is of extraordinary efficacy in regard of dissolving any coagulated blood and juices frequently consequent to bruises and strains; which, by their pressure on the muscles, tendons, and small vessels, cause an obstruction of the circulation of the blood in these parts, and by that means bring on a tumour, from whence proceeds a lameness. The application of this mixture will be of great help to nature in strengthening the relaxed substances, and due rest will complete the cure.

The

The Incomparable BALSAM for WOUNDS.

Take the best Venice-turpentine and balsam of Tolu, of each an ounce, storax and gum benjamin, of each two ounces, gum guaiacum, aloes, myrrh, olibanum, flowers of St. John's-wort, and angelica roots, of each half an ounce. Beat these well together, and add eighteen ounces of spirits of wine. Then digest the whole in a hot dunghill for a fortnight or three weeks, shaking the bottle between whiles. After that strain off the liquor clear, and keep it close stopp'd up for use.

This balsam may be applied to all wounds immediately either by means of a feather, fine flax, or by injection, and will, independently of any other medicine, if recur'd to time enough, soon effect a cure, without bringing on a suppuration. It is also highly serviceable in all obstructions of the urinary passages. Half an ounce of it, with forty drops of the anodyne balsam, in a pint of water made lukewarm, will give speedy relief in the gripes, if they do not proceed from costiveness. Should that be the case, the dose must be accompanied with an oily mixture, and the horse raked as far as possible with a small hand. After that give an emollient clyster. See the chapter on the Gripes.

For

flux
in the

For a DRY-COUGH.

Take a quart of new milk, and a head of garlick shred fine. Boil the milk to a pint, and then take it off the fire, and strain it through a cloth. When strained, add to it diapente and aniseeds, of each an ounce, and half a pound of honey.

Let this be given to the horse milkwarm on an empty stomach, and let him fast an hour after it. Then let him have a little warm water, and hay always sprinkled with water, and about eleven o'clock a mash of bran. This may be repeated every other day for three times.

There is not in the whole empire of medicine a more powerful remedy than this drink in the case before us; which I have experienced, for above twenty years past, to be of the utmost efficacy in a dry cough, where the horse has not been quite broken-winded. Were the virtue of a medicine of this nature duly set forth, and the knowledge of its salutary effect sufficiently propagated, there would be no occasion for Dr. R—ok's advertising his balls and drinks, that are nothing else than a downright imposition on the public.

OF STARCH.

In an inflammatory fever attended with a flux, two or three uncies of this, dissolved in the water the horse drinks, will be of service,
as

as it will guard the stomach and intestines against the action of sharp, corroding, particles, which would necessarily increase the disorder. It may also be used in clysters, in order to answer the same intention.

A safe and efficacious LINIMENT, to take off a SPLENT, or any hard EXCRESCENCE.

Take an ounce of nerve-ointment, an ounce and a half of oil of origany, forty drops of tincture of euphorbium, sublimate in fine powder and Spanish flies powdered, of each half a dram. Mix these into a liniment, and, previously to the use of it, apply a gentle bandage below the tumour, to prevent the humours when rendered fluid, from affecting the parts underneath. Then rub in the ointment well for a considerable time, and in about fourteen hours the splent will become quite soft, and a kind of dew appear on the skin. When matters are advanced thus far, with a finger dipped in sweet oil gently stroke the part, till the tumour be intirely discharged.

An OINTMENT for GREASY HEELS.

Take white lead, white vitriol, roch-alum, of each half a pound, an ounce of verdigrease, three ounces of green copperas, all reduced to a fine powder, an ounce of oil of vitriol, and half a pound of honey. Work these

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these up with train-oil to the consistence of a liniment.

This is calculated for the curbing those corroding ulcers, that are sometimes attendant on greasy heels. It is of known efficacy in regard of answering this purpose, and is, at the same time an effectual remedy for the relaxation of the parts, which a continual drain must of course always bring on.

A LINIMENT for a JOINT-OIL; or an Oozing from the Joint resembling an oily Substance.

Take an ounce of tobacco-ojntment, four ounces of camphorated spirit of wine, and half an ounce of sublimate. Mix these well together in a pipkin, and simmer them over a gentle fire for an hour: and then dress the part affected, with the mixture moderately warm.

My reason for keeping it so long over the fire is, to destroy or blunt the sharp particles of the sublimate, so as to render it less caustic, and to prevent too great an irritation on the parts.

A CLYSTER in an INFLAMMATION of the INTESTINES.

Take a sheep's-head, and boil it down in six quarts of water to two. Then strain off the liquor,

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liquor, and add to it a dram or two of opium.

This clyster is to be given in any inflammation of the bowels. But should an inflammation of that nature be consequent to strong aloetic purges, in which case a suspicion may arise that the intestines are stripped of their mucus, on this occasion two or three ounces of common oil with half a pound of mutton-suet may be added to it, in order to take off those irritations, that may possibly have been the cause of the disorder.

The following is a drink I made use of with good success in the distemper amongst horses in the year fifty-one, and which was likewise found of great service to the horned cattle, on an appearance of their having caught the infection, so rise at that time.

Take rue, water-germander, and clivers, of each two double handfuls, two heads of garlick, an ounce of aniseeds, a handful of parsley-roots, and two ounces of antimony in fine powder. Boil these very slowly in a gallon of rain-water, the vessel close covered, till one quart is consumed. Then strain off the remainder, and keep it well stopped up for use.

After bleeding the horses plentifully, and in case of costiveness, the administration of a clyster, I gave a pint of this drink morning and evening with

with two ounces of honey in it. This method absolutely succeeded in regard of every horse I had under my care, without any necessity of recurring either to rowelling or purging: and that without any swelled leg supervening, which I afterwards observed was an incident common to the generality of horses. I kept the body open with mashes, and the head warm: and, when I found the glands about the head (which was most affected in this disease) swelled, I rubbed in some hot goose-grease.

As I have recommended the turning out horses on salt marshes in all chronical distempers, I shall just give a little hint concerning the action of them on the body. Salt-water, when taken inwardly, mixing itself with the fluids of the body, attenuates and divides the viscid cohesions of the blood and juices, and by its deterfive quality scours the passages of the glands. Hence all obstructions are removed, and of course proper nourishment conveyed to the whole system of the animal œconomy. The grass, no doubt, is very serviceable in regard of its assisting the salt-water in its operations, as it lubricates and widens the vessels, and by its soft balsamic quality prevents the irritation, which might otherwise be consequent to the action of the water. Besides, it is cooling, diuretic, and moderately purgative, and therefore, accompanied with gentle exercise, cannot but be highly beneficial in all chronical disorders.

As to the preparation I promised of liver of antimony, on reflexion, as the process in regard of it requires a somewhat nice management, I think it more adviseable to buy the liver of antimony of the shops.



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